

## LIST OF PUBLICATIONS, CONFERENCE PRESENTATIONS AND INVITED LECTURES

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Publications: #104 (#81 registered in online Academic Library of Comenius University on the webpage [http://edo.uniba.sk:8000/cgi-bin/gw\\_45\\_1e/chameleon](http://edo.uniba.sk:8000/cgi-bin/gw_45_1e/chameleon)), #13 registered in ISI Web of Knowledge <http://portal.isiknowledge.com/>

Conference presentations: #54

Invited lectures: #20

Link to the selected papers: <http://www.defm.fmph.uniba.sk/~katina/katinaStatShapeAnalysis.htm>

In 2006 and 2007 marked with **blue** (# 36 papers + # 12 presentations + # 5 invited talks)

### 1) Electronical educational texts (#1)

1. **Katina, S.**, 2006: Vybrané kapitoly z počítačovej štatistiky I. (<http://www.iam.fmph.uniba.sk/skripta/katina/> )

### 2) Technical Reports (#1)

1. **Katina, S.**, 2006: Parametric and non-parametric statistical inference in shape analysis.

### 3) Chapters in Monographs (#2)

1. Šefčáková, A., **Katina, S.**, 2007: Geometrical; analysis of adults skulls from Předmostí (in press, Monograph Chapter, *Fossil hominids from Předmostí nr. Přerov : Old documentation and new reading*)
2. Velemínský, P., Brůžek, J., Velemínská, J., **Katina, S.**, 2007: Non-metric traits in the Gravettian human population sample from Předmostí (in press, Monograph Chapter, *Fossil hominids from Předmostí nr. Přerov : Old documentation and new reading*)

### 4) Papers on Statistics in Refereed Journals (#7)

1. **Katina, S.**, 2003: Application of allometric shape analysis to fish growth with geometrical notes. *Tatra Mountains, Mathematical Publication* 26: 323 – 336
2. **Katina, S.**, Kováč, V., 2006: Shape analysis: distance-based methods vs. coordinate-based methods in external morphology of fishes (submitted, *Journal of Classification*)
3. **Katina, S.**, 2005: Two independent sample Hotelling  $T^2$  test using Bookstein 2D coordinates in statistical shape analysis: simulation study and applications (submitted, *Austrian Journal of Statistics*)
4. Wellmann, R., **Katina, S.**, Müller Ch. H., 2007: Calculation of simplicial depth estimators for polynomial regression with application to tests in shape analysis. *Computational Statistics & Data Analysis* 51: 5025 – 5040
5. **Katina, S.**, Wellmann, R., Müller Ch. H., 2007: Simplicial depth estimators and tests in examples from shape analysis. *Tatra Mountains Mathematical Publications* (accepted)
6. **Katina, S.**, 2005: Comparison of Procrustes and Bookstein 2D coordinates in shape analysis: simulations, bagplots for landmarks and applications. *Forum Statisticum Slovacum* 2 (2005): 47-51
7. **Katina, S.**, Štulajter, F., Kellerová, E., 2005: Aplikácia kváziperiodických časových radov v kardiológii. (Application of quasiperiodic time series in cardiology). *Forum Statisticum Slovacum* 3 (2005): 191-198

### 5) Original Manuscripts on Statistics in Refereed Proceedings Published as Books (#7)

1. **Katina, S.**, 2001: Výpočtové aspekty odhadov v analýze prežívania. (Computational aspects of estimates in survival analysis). *Výpočtová štatistika (Computational Statistics)* **10** : 61-66 (in Slovak)
2. **Katina, S.**, 2002: Biomedicínske aspekty testovania hypotéz v analýze prežívania. (Biomedical aspects of inference procedures in survival analysis). In: Handlovičová, A., Kalina, M., Nánasiová, O., (Eds.). *PRASTAN Proceedings 2002*, Kočovce, Slovakia: 25 – 34 (in Slovak)
3. **Katina, S.**, 2003: Normalita vo výuke počítačovej štatistiky: kvantil-kvantil graf s Atkinsonovou obálkou. (Normality in education of computer statistics: Q-Q plot with Atkinson's envelope). *Výpočtová štatistika (Computational Statistics)* **12**: 50-53 (in Slovak)
4. **Katina, S.**, Mikuš, P., 2004: Problematické otázky analýzy kategoriálnych dát (Problematic questions in analysis of categorical data). *Výpočtová štatistika (Computational Statistics)* **13**: 44-48
5. **Katina, S.**, Mizera, I., 2004: Total variation penalty in image warping: some comparisons with Bookstein roughness penalty. *Compstat'2004 Symposium, Proceedings in Computational Statistics*, Physica-Verlag, Heidelberg: 1301 – 1308
6. **Katina, S.**, 2006: *Statistical Analysis of Designed Experiments. Proceedings of XVIIth Summer School of Biometrics, Lednice, ČR*: 11 - 44
7. **Katina, S.**, 2007: Shape analysis in the light of simplicial depth estimators In S. Barber, P.D. Baxter, & K.V.Mardia (eds), *Systems Biology & Statistical Bioinformatics*, pp. 51-54. Leeds, Leeds University Press

### 6) Original Manuscripts on Applications in Refereed Proceedings Published as Books (#4)

1. Kováč, V., **Katina, S.**, 2003: Ontogenetic patterns and interspecific variability in external morphology of three sympatric *Gymnocephalus* species. *Percis III, the third international percis fish symposium, Proceedings, July 20 – 24 2003*, Medison, Wisconsin, USA: 25–26
2. **Katina, S.**, Cagáň, S., Wimmerová, S., 2001: Aplikácia Coxovho regresného modelu pri analýze klinickej letality pacientov s akútnym infarktomyokardu na Slovensku. (Application of Cox regression model in analysis of clinic letality of patients with acute cardiac infarction in Slovakia). In: Vaňo, B., Chajdiak, J., Luha, J., (Eds.), Recent population trend in Slovakia in European Context. *8<sup>th</sup> Demographical and Statistical Conference, Proceedings*. Ražské Teplice, Slovakia: 65-69 (in Slovak)
3. **Katina, S.**, 2002: Štatistická analýza medicínskych dát: Lineárne modely a časové rady v kardiológii (Statistical analysis of medical data: Linear models and time series in cardiology). *Výpočtová štatistika (Computational Statistics)* **11**: 36 – 38 (in Slovak)
4. Zajacová, P., **Katina, S.**, Neščáková, E., Kayserová, H., 2005: Štatistické modelovanie genotypu, klinických a antropologických parametrov u slovenských pacientov s cystickou fibrózou. *Študentská vedecká konferencia 2005, 1. zväzok - biologická sekcia, PRIF UK Bratislava*: 160-162

### 7) Papers on Statistics Published in Proceedings (not refereed, #3)

1. **Katina, S.**, 2002: Some new Aspects of Principal Component Analysis with Application to Biological Sciences. In: Hartman, J., Michálek, J., Peek, J. (Eds.), Biometrické metódy a modely v súčasnej vede a výskume. *Sborník referátov (Proceedings)- XV. Letná škola biometriky (Summer School of Biometrics)*, Lednice, Czech Republic, September 2-6 2002: 161-170
2. **Katina, S.**, 2004: Vybrané matematicko – štatistické modely v analýze tvaru (Selected statistical models in shape analysis). Biometrické metódy a modely v pôdohospodárskej vede, výskume a výučbe. *Sborník referátov (Proceedings) – XVI. Letná škola biometriky (Summer School of Biometrics)*. Račkova dolina, Pribylina, 21.-25.06.2004: 79 – 87 (in Slovak)
3. **Katina, S.**, 2004: Profilová analýza: Úvod do profilovej analýzy a jej aplikácie v elektrokardiológii (Profile analysis with applications to electrocardiology). Biometrické metódy a modely v pôdohospodárskej vede, výskume a výučbe. *Zborník referátov (Proceedings)- XVI. Letná škola biometriky (Summer School of Biometrics)*. Račkova dolina, Pribylina, 21.-25.06.2004: 45 – 55 (in Slovak)

## 8) Papers on Applications in Refereed Journals (#43)

1. Thurzo, M., Šefčáková, A., **Katina, S.**, Jakab, J., Beňuš, R., Bodoríková, S., 2002: Dental disease as an indicator of ecological factors in medieval skeletal populations from Slovakia. *Biennial Books of European Anthropological Association (EAA) 2* : 233 – 248
2. Bacharová, L., Mateášik, A., **Katina, S.**, Horáček, M., Engblom, H., Wagner, G.S., 2004: Changes in QRS complex during PTCA: Comparison of vectorcardiographic and topographic presentation of orthogonal ECG. *International Journal of Bioelectromagnetism 5*, 1: 96 – 97
3. Makatsori A., Dunčko R., Monček F., Loder I., **Katina S.**, Ježová D., 2004: Modulation of neuroendocrine response and non-verbal behavior during psychosocial stress in healthy volunteers by the glutamate release inhibiting drug lamotrigine. *Neuroendocrinology 79*: 34-42
4. Kováč, V., **Katina, S.**, Copp, G. H., Siryová, S., 2006: Ontogenetic variability in external morphology of spiralin *Alburnoides bipunctatus* from the River Rudava (Danube catchment). *Journal of Fish Biology 68*: 1257 – 1270
5. Tomeček, J., Kováč, V., **Katina, S.**, 2005: Ontogenetic variability in external morphology of native (Canadian) and nonnative (Slovak) populations of pumpkinseed (*Lepomis gibbosus*, Linnaeus 1758). *Journal of Applied Ichthyology 21*: 335 – 344
6. Lavrinčíková, M., Kováč, V., **Katina, S.**, 2005: Ontogenetic variability in external morphology of round goby *Neogobius melanostomus* from Middle Danube, Slovakia. *Journal of Applied Ichthyology 21*: 328 – 334
7. Velemínská, J., Šmahel, Z., **Katina, S.**, 2007: Development prediction of sagittal intermaxillary relations in patients with complete unilateral cleft lip and palate during puberty. *Acta Chirurgiae Plasticae 49*, 2: 41-46
8. Braga J., Treil J., **Katina S.**, 2005: A trigeminal cephalometry to explore covariance and evolution of ontogenetic patterns in extant humans and chimpanzees. (submitted, *PNAS*)
9. Šefčáková, A., **Katina, S.**, Bružek, J., Velemínská, J., Velemínský, P., 2007: Comparison of Gravettian skulls from Předmostí with recent skulls from Pachner collection: Bookstein parametric interpolation model and geometrical quadratic discriminant analysis (submitted, *American Journal of Physical Anthropology*)
10. Bružek, J., Velemínský, P., **Katina, S.**, Šefčáková, A., Velemínská, J., 2007: Epigenetic traits of human skulls from Předmostí near Přerov (Gravettian, Moravia, Czech republic): a test of some hypothetic kinship of buried individuals. (submitted, *Journal of Human Evolution*)
11. Šefčáková, A., Thurzo, M., **Katina, S.**, 2006: Craniometric characteristics of early medieval skeletons from Borovce (Piestany district, Slovakia) connected with an allochthonic clasped spur: A multivariate analysis (PCA). *Antropologie XLIV/2*: 165–179
12. **Katina, S.**, Šefčáková, A., Velemínská, J., Bružek, J., Velemínský, P., 2004: A Geometric approach to cranial sexual dimorphism in the upper palaeolithic skulls from Předmostí (Upper Palaeolithic, Czech Republic). *Journal of the National Museum, Natural History Series, Vol. 173 (1-4)*:133 – 144
13. Velemínská, J., Bružek, J., Velemínský, P., Šefčáková, A., **Katina, S.**, 2004: The use of recently re-discovered glass plate photodocumentation of those human fossil finds from Předmostí u Přerova destroyed during World War II. *Journal of the National Museum, Natural History Series, Vol. 173 (1-4)*:129 – 132
14. Bacharová, L., Mateášik, A., **Katina, S.**, Horáček, M., Engblom, H., Palm, O., Selvester, R., Wagner, G.S., 2006: Changes in QRS complex during percutaneous transluminal coronary angioplasty detected by depolar electrocardiotopography (in press, *Journal of Electrocardiology*)
15. Vranova, V., **Katina, S.**, Kirschnerova, G., Markova, K., Sujanova, M., Ilencikova, D., Tothova, A., 2005: An Importance of additional chromosomal aberrations and other factors on post transplantation outcome of patients with CML. *Neoplasma 52, 5*: 381 – 387
16. Thurzo, M., **Katina, S.**, Lengyelova, T., 2002: Skeletal remains of the Hungarian Kingdom palatine George (Juraj) Thurzo's family: Identification of two female individuals by means of statistical analysis (Identifikácia kostrových pozostatkov dvoch ženských príslušníkov rodiny palatína Juraja Thurzu: Štatistická analýza). *Slovak Anthropology (Bull. Slov. antropol. Spoloč.) 5*:100-103. (in Slovak)
17. **Katina, S.**, 2003: Coxov regresný model a jeho použitie v medicíne na predikciu letality chorých s akútnym infarktóm myokardu. (Cox regression model in medicine with application to prediction of

- letality of patients with acute cardiac infarction). *Slovak Statistics and Demography (Slovenská štatistika a demografia)* **13, 2**: 30 – 37 (in Slovak)
18. **Katina, S.**, Kayserová, H., Neščáková, E., Beránková, M., 2003: Relationship between anthropological measurements and variables of surviving in Cystic Fibrosis Patients. *Slovak Anthropology (Slovenská antropológia)* **6 (n.s.1)**: 61 – 64
  19. **Katina, S.**, Kellerová, E., Regecová, V., 2003: Application of regression trees in evaluation of ventricular repolarization parameters in groups of subjects with different blood pressure. *Slovak Anthropology (Slovenská antropológia)* **6 (n.s.1)**: 65 - 68
  20. Šefčáková, A., **Katina, S.**, Velemínská, J., Bružek, J., Velemínský, P., 2003: Geometric Analysis of Sexual Dimorphism in Upper Palaeolithic Skulls from Předmostí (Czech Republic). *Slovak Anthropology (Slovenská antropológia)* **6 (n.s.1)**: 141 – 146
  21. **Katina, S.**, Almašiová, I., Kellerová, E., Regecová, V., 2004: Vybrané problémy štatistickej analýzy opakovaných meraní s aplikáciami v elektrokardiológii. (Selected problems in statistical analysis of repeated measures with applications to electrocardiology) *Slovak Statistics and Demography (Slovenská štatistika a demografia)* **14, 2**: 36 – 48 (in Slovak)
  22. **Katina, S.**, Kayserova H., 2004: Statistical analysis of Patients with Cystic Fibrosis in Slovakia. *Slovak Anthropology (Slovenská antropológia)* **7 (n.s.2)**: 29 – 33
  23. Velemínská J., **Katina, S.**, Šmahel, Z., Sedláčková, M., 2006: Analysis of facial skeleton shape in patients with complete unilateral cleft lip and palate: Geometric morphometry. *Acta Chirurgiae Plasticae* **48**, 1: 26-32
  24. Zajacová, P., **Katina, S.**, Neščáková, E., Kayserová, H., Beránková, M., 2005: Analýza Vzťah medzi genotypom a antropometrickými ukazovateľmi u slovenských pacientov s cystickou fibrózou (The analysis of anthropological variables and genotype in patients with cystic fibrosis in Slovakia). *Slovak Anthropology (Slovenská antropológia)* **8**, 1: 188 – 194
  25. Murín, G., Mičieta, K., Ligasová, A., Chrenová, J., Keller, J., Slade, D., **Katina, S.**, Savova, M., 2006: Manifestation of aging on testa of the different *Vicia faba* L. cultivars in the seed bank as marker of time of storage. (submitted, *Acta Facultatis Rerum Naturalium Universitas Comenianae*)
  26. Fuchsová, M., Neščáková, E., Beránková, M., **Katina, S.**, 2005: Sledovanie telesnej stavby slovenských detí s kongenitálnou hypotyreózou (Monitoring the body structure of Slovak children with the congenital hypothyroidism). *Slovak Anthropology (Slovenská antropológia)* **8**, 1: 50 – 55
  27. Neščáková, E., Luptáková, L., Kardošová, H., Drobná, H., **Katina, S.**, Varga, I., Džupinková, Z., 2005: Telesný rast a vývin detí bratislavského kraja do jedného roku života (The body growth and development of children from the Bratislava Region until one year of age) *Slovak Anthropology (Slovenská antropológia)* **8**, 1: 123 – 128
  28. Fuchsová, M., Neščáková, E., Beránková, M., **Katina, S.**, 2005: Porovnanie telesnej stavby slovenských detí s jednotlivými typmi kongenitálnej hypotyreózy (Evaluation of body structure of the Slovak children with some type of congenital hypothyroidism). *Slovak Anthropology (Slovenská antropológia)* **8**, 2: 70-74
  29. Karahutová, A., Fuchsová, M., Neščáková, E., Beránková, M., **Katina, S.**, 2005: Antropometrické sledovanie obéznych detí na Slovensku (Anthropometrical monitoring of obese children in Slovakia). *Slovak Anthropology (Slovenská antropológia)* **8**, 2: 86 - 93
  30. Zajacová, P., **Katina, S.**, Neščáková, E., Kayserová, H., Beránková, M., 2006: Relationship between the genotype and anthropological parameters in Slovak patients with cystic fibrosis. *Česká antropologie* **56**: 106 - 108
  31. Fuchsová, M., Neščáková, E., Luptáková, L., Drobná, H., **Katina, S.**, 2006: The influence of breastfeeding on somatic growth and development in children to one year of age. *Česká antropologie* **56**: 43 – 44
  32. Bodoriková, S., Beňuš, R., Thurzo, M., **Katina, S.**, Selecká, P., 2006: *Dentition state in juvenile and adult individuals from Early Medieval cemetery Nitra – Lupka (9<sup>th</sup> c. A.D., Southwestern Slovakian)*. *Acta Rer. Natur. Mus. Nat. Slov.* **LII**: 56-68
  33. Šefčáková, A., **Katina, S.**, Velemínská, J., Bružek, J., Velemínský, P., 2006: Upper Palaeolithic skulls from Předmostí (Czech Republic) in light of recent and fossil databases: sex determination as never ending story. *Acta Rer. Natur. Mus. Nat. Slov.* **LII**: 72-84
  34. Fuchsová, M., Neščáková, E., Luptáková, L., Drobná, H., **Katina, S.**, 2006: The influence of breastfeeding on somatic growth and development in children to one year of age (in Slovak). *Česká*

- antropologie*, **56**: 50-53
35. Zajacová, P., Kayserová, H., Neščáková, E., **Katina, S.**, Beránková, M., Kapustová, Z., 2006: Relationship between the genotype and anthropological variables in Slovak patients with cystic fibrosis (in Slovak). *Česká antropologie*, **56**: 145-148
  36. Kellerová, E., Regecová, V., **Katina, S.**, Titomir, L.I., Aidu, E.A.I., Trunov, V.G., Szathmáry V., 2006: The effect of psychoemotional load on ventricular repolarization reflected in integral body surface potential maps. *Physiological Research 55 (Suppl. 1)*: S99-S105
  37. Velemínská, J., Bružek, J., Velemínský, P., Bigoni, L., Šefčáková, A., **Katina, S.**, 2006: Variability of the Upper Palaeolithic skulls from Předmostí near Přerov (the Czech Republic): craniometric comparison with recent human standards. (accepted, *HOMO*)
  38. Trnovec, T., Šovčíková E., Husťák, M., Wimmerová, S., Kočan, A., Jurečková, D., Langer, P., Palkovičová, L., Drobná, B., **Katina, S.**, 2006: Association between Environmental Exposure to Polychlorinated Biphenyls and Hearing Impairment in Eight-and-Nine-Years Old Children in Slovakia. (submitted, *Environmental Health Perspectives*)
  39. Dittami, J.P., Keckeis, M., Machatschke, I., **Katina, S.**, Zeithofer, J., Kloesch, G., 2006: Sex differences in the reaction to pairsleep or sexual contact during nocturnal sleep phases in humans (in press, *Sleep and Biological Rhythms*)
  40. Dittami, J., **Katina, S.**, Möstl E., Eriksson J., Machatschke, I.H., Hohmann, G., 2006: Sex differences in the urinary androgen and cortisol metabolites in bonobos (*Pan paniscus*) (accepted, *General and Comparative Endocrinology*)
  41. Mišíková, P., Kayserová, H., Neščáková, E., **Katina, S.**, Beránková, M., Kapustová, Z., 2006: Analýza vzťahu medzi klinickými prejavmi a antropometrickými ukazovateľmi u slovenských pacientov s cystickou fibrózou. *Slovenská antropológia*, **9**, **1**: 16-21
  42. Beňuš, R., Masnicová, S., Thurzo, M., **Katina, S.**, 2006: Paleopatologické lézie u nedospelých jedincov Zo slovansko-avarského Pohrebiska cífer-pác. *Slovak Anthropology (Slovenská antropológia)* **9(2)**, **1-3**: 1-3
  43. Selko, D., Bacharova, L., Rusnakova, V., **Katina, S.**, Liska, B., 2007: Hostility in coronary heart disease patients and health care workers in Slovakia. *Journal of Health Organization and Management* **21**: 79-91
  44. Regecová, V., **Katina, S.**, Kellerová, E., Szathmáry, V., 2007: Influence of subcutaneous fat on the variability of body surface integral maps. *Slovak Anthropology (Slovenská antropológia)* (accepted)

## 9) Abstracts (#23)

1. **Katina, S.**, Kayserová, H., 2002: Survival Analysis of Patients with Cystic Fibrosis in Slovakia. *Book of Abstracts, 23<sup>rd</sup> Annual Conference The International Society for Clinical Biostatistics, September 9-13 2002, Dijon, France*: 79
2. Šefčáková, A., **Katina, S.**, Bružek, J., Velemínská, J., Velemínský, P., 2004: Shape Analysis of Sexual Dimorphism in Upper Palaeolithic Skulls from Předmostí (Czech Republic). *Book of Abstracts, 30<sup>th</sup> International Geological Congress, Florence, Italy, 21 – 28 August 2004*: 98
3. Bružek, J., Velemínský, P., Velemínská, J., Šefčáková, A., **Katina, S.**, 2004: Epigenetic traits of human skulls from Předmostí near Přerov (Gravettien, Moravia, Czech republic): a test of some hypothetical kinship of buried individuals. *Book of Abstracts, 14<sup>th</sup> Congress of European Anthropological Association (EAA), Greece*: 15-3
4. Kayserová, H., Remiš, B., Brezina, M., Polakovič, M., Hájková, M., Zlochová, D., **Katina, S.**, Neščáková, E., Kadasi, L., 2005: Genotype – phenotype correlation – clinical impact of combination of severe and mild CFTR mutations. *8<sup>th</sup> International Symposium for Cystic Fibrosis. 4-5 February 2005, Program and Abstracts*, Charles University Hospital Prague – Motol: 20
5. Tomeček, J., Kováč, V., **Katina, S.**, 2005: Morphological plasticity of pumpkinseed (*Lepomis gibosus*, Linnaeus 1758) within the epigenetical context. *Geophysical Research Abstracts, Vol. 7*: 08103
6. Ľavrinčíková, M.; Kováč, V., **Katina, S.**, 2005: Epigenetical context in the life-history traits of round goby *Neogobius melanostomus* from Slovak stretch of the Danube. *Geophysical Research Abstracts, Vol. 7*: 08109

7. **Katina, S.**, Velemínská, J., Šmahel, Z., 2005: Regression partitioning and statistical shape analysis in prediction of sagittal intermaxillary relations in patients with complete unilateral cleft lip and palate during puberty. *Abstract Book. 26th Annual Conference of International Society for Clinical Biostatistics (ISCB). August 21-25, 2005, Szeged, Hungary*: 114
8. Zajacová, P., **Katina, S.**, Neščáková, E., Kayserová, H., 2005: LM and GLM in statistical analysis of relationship between anthropological measurements and variables of surviving in cystic fibrosis patients in Slovakia. *Abstract Book. 26th Annual Conference of ISCB. August 21-25, 2005, Szeged, Hungary*: 189
9. Bacharová, L., Mateášik, A., **Katina, S.**, Horáček, M., Engblom, H., Wagner, G.S., 2003: The use of Dipolar ElectroCARDioTOpography for visualization of ischemic changes of QRS complex during coronary occlusion of balloon angioplasty. *Journal of Electrocardiology* **5, 1**: 39
10. Kayserová, H., Kadasi, L., Neščáková, E., **Katina, S.**, Brezina, M., Beránková, M., 2004: Relationship between anthropological measurements and variables of surviving in CF patients. *Journal of Cystic Fibrosis* : 77 (*Abstract in 27th European Cystic Fibrosis Conference*, Birmingham, UK)
11. Makatsori, A., Dunčko, R., Loder, I., Monček, F., **Katina, S.**, Ježová, D., 2004: Neuroendocrine response and non-verbal behaviour during mental stress following single dose lamotrigine in healthy subjects. *European Psychiatry* **19, Suppl. 1**: 149–198
12. Šefčáková, A., **Katina, S.**, Bružek, J., Velemínská, J., Velemínský, P., 2005: Comparison of Gravettian skulls from Predmosti with recent skulls from Pachner collection: roughness penalty approach in shape analysis. *American Journal of Physical Anthropology. Annual Meeting Issue. AAPA Abstracts, Supplement 40*: 186 – 187
13. Velemínska, J., Velemínsky, P., Bruzek, J., Sefcakova, A., **Katina, S.**, 2005: The digital graphic analysis of the facial skeleton of Upper Palaeolithic skulls from **Predmosti near Prerov (Czech Republic)**. *American Journal of Physical Anthropology. Annual Meeting Issue. AAPA Abstracts, Supplement 40*: 212
14. Selko, D., **Katina, S.**, 2004: Je hostilita rizikový faktor kardiovaskulárnych ochorení? (Hostility as a risk factor for cardiovascular diseases). *Supplement to Cardiology*, Vol. **13**, No. S1 : 28S (in Slovak)
15. **Katina, S.**, 2001: Testing of hypotheses in survival analysis (Testovanie hypotéz v analýze prežívania). *Zborník (Proceedings) PRASTAN 2001*, Kočovce, Slovakia: 168 (in Slovak)
16. Selko, D., Mlynárik, M., Vízi, L., **Katina, S.**, Ježová, D., 2002: Behavioral, psychological and endocrine characteristics in nurses working at intensive care units. *Abstract in X. international congress of the Czech and Slovak Neurochem Society, Abstract Book. Neuroconference in the third milenium, June 1 – 5 2002, Častá, Slovakia*
17. **Katina, S.**, Bookstein, F. L., Gunz, P., Schaefer, K., 2007: Was it worth digitizing all those curves? A worked example from craniofacial primatology *American Journal of Physical Anthropology. Annual Meeting Issue. AAPA Abstract S44*: 140-140
18. Šefčáková, A., **Katina, S.**, Velemínská, J., Bružek, J., Velemínský, P., 2007: Size factor as a hard nut in the sex estimation of skulls: Upper Paleolithic sample from Predmosti (Czech Republic) as an example. *American Journal of Physical Anthropology. Annual Meeting Issue. AAPA Abstract S44*: 213-213
19. Dobisíková, M., **Katina, S.**, Velemínský, P., 2007: Variability of the Stature of the Central European Population from the Neolithic Age to Present. *American Journal of Physical Anthropology. Annual Meeting Issue. AAPA Abstract S44*: 100-100
20. **Katina, S.**, Wellmann, R., Müller Ch. H., 2006: Comparison of simplicial depth estimators with some other estimators. *PROBASTAT 2006. The Fifth International Conference on Mathematical Statistics. ABSTRACTS. June 5 – 9, 2006, Smolenice Castle, Slovak Republic*: 31
21. Záhorská, E., Kováč, V., **Katina, S.**, 2006: Ontogenetická variabilita externej morfológie hrúzovca sieťovaného (*Pseudorasbora parva*) v povodí Dunaj. In: Stloukal, E. (ed.). *Zborník abstraktov z konferencie 12. Feriencove dni*, Faunima, Bratislava: 51
22. Kloesch, G., Dittami, J.P., Keckeis, M., Machatschke, I., **Katina, S.**, Zeitlhofer, J., 2007: Sex differences in the reaction to pairsleep in humans. In *New Directions in the Social and Cultural Study of Sleep. Abstracts: 2*
23. Kloesch, G., Keckeis, M., Prossinger, H., Dittami, J.P., **Katina, S.**, Zeitlhofer, J., Dittami, J., 2007: Geschlechtsunterschiede in der zirkadianen reaktion auf umgebungsreize. In *Jarestagung 2007. Austrian Sleep Research Association Abstracts*: 11

## 10) Theses (#5)

1. **Katina, S.**, 1999: *Contribution to taxonomy of chosen Populus species*. Degree „Mgr.“ (equivalent to M.Sc.) thesis in Mathematics and Biology, Comenius University, Bratislava, supervised by Karol Mičieta, Department of Botany (in Slovak)
2. **Katina, S.**, 2000: *Production, statistical analysis and utilization of didactic tests in regional environmental education from the volcanic mountains – Pohronský Inovec, Vtáčnik, Štiavnické mountains*. Degree „PaedDr.“ (doctor of pedagogy, specialized in Biology Education) thesis (in Slovak)
3. **Katina, S.**, 2001: *Inference procedures in survival analysis*. Degree „RNDr.“ (doctor of natural sciences, specialized in Probability and Mathematical Statistics) thesis, Comenius University, Bratislava (in Slovak)
4. **Katina, S.**, 2002: *Multivariate Shape Analysis: Implementations to S-PLUS, Applications to Biological Sciences*. PhD. minimal thesis, Comenius University, Bratislava, supervised by Ivan Mizera (University of Alberta, Canada)
5. **Katina, S.**, 2004: *Total variation penalty in image warping and selected multivariate methods in shape analysis*. PhD. thesis, Comenius University, Bratislava, supervised by Ivan Mizera (University of Alberta, Canada) and František Štulajter (Comenius University, Slovakia)

## 11) Papers not Concerned with Statistics (#9)

1. **Katina, S.**, 1996: Národná prírodná pamiatka Starohutský vodopád a Andezitové kamenné more (National Natural Relic Starohutský Waterfall and Andesite Stone Sea). *Mineralia Slovaca* **6, 58**: 10-11 (in Slovak)
2. **Katina, S.**, 2000: Inventarizačný prieskum flóry Narodnej prírodnej pamiatky Starohutský vodopád (Pohronský Inovec). (Inventory research of flora of the National monument Starohutsky Waterfall (Pohronský Inovec Mts.), *Bulletin of Slovak Botanical Society (Bulletin Slovenskej botanickej spoločnosti)* **22**: 135-140 (in Slovak)
3. **Katina, S.**, 1997: Taxonomické poznámky k Populus alba aggr. (Taxonomical comments to Populus alba aggr.). In: Vreštiak, P., Hrubík, P., Drobný, I., (Eds.), *Adaptation of wood species on xeric environment* (Adaptácia drevín na aridizáciu prostredia). *Proceedings, IV Dendrological conference*. Piešťany: 61-66 (in Slovak)
4. **Katina, S.**, Mičieta, K., 1998: Príspevok ku karyotaxonomii niektorých druhov rodu Populus. (Contribution to karyotaxonomy of chosen Populus species) In: Bencat, T., Gregor, M., (Eds.), *Coppice and Dendrologic Objects of the Slovak Central Mountains and the Topical Problems of Dendrology* (Porasty a dendrologické objekty Slovenského stredohoria a aktuálne problémy dendrológie). *Proceedings*. TU Zvolen: 178-181 (in Slovak)
5. Bizubová, M., **Katina, S.**, 1997: Náučný chodník Vojšín v Pohronskom Inovci: Námet na poznávanie miestnej krajiny. *Pedagogické spektrum* (časopis ŠPU). **1,2,VI**: 77-83 (50%)
6. Bizubová, M., **Katina, S.**, 1998: Predstavujeme Vám nový náučný chodník Vojšín. *Geografia* **1,6/1998**: 27-28
7. Bizubová, M., **Katina, S.**, 1999: Zaujímavá expozícia Pohronského múzea v Novej Bani. *Geografia* **1/1999**: 20
8. **Katina, S.**, 1996: Národná prírodná pamiatka Starohutský vodopád. *My Žiara*, 15.10.1996: 6
9. **Katina, S.**, 1999: Pútkov vŕšok - najmladšia sopka v strednej Európe. *Učiteľské noviny* **6,XIX,1999**:77-83

## 12) Conference Presentations (#54)

1. **2007/09: Antropologické dni**, 30. septembra – 2. októbra 2007, Budmerice, SR
  - **Lecture 1: Shape-and-size analysis: Thought about Rudolf Martin after almost 100 yrs** *Analýza tvaru a veľkosti*
  - **Lecture 2: Influence of subcutaneous fat on the variability of body surface integral maps**
2. **2007/09: EUROPEAN CONGRESS OF ICHTHYOLOGY**, 9–13 September 2007, Cavtat (Dubrovnik), Croatia (*Ontogenetic variability in external morphology of monkey goby, Neogobius fluviatilis (Pallas, 1814), from the river Hron, Slovakia*)
3. **2007/08: International Society of Clinical Biostatistics (ISCB) Meeting**, 29 July-2 August 2007, Alexandroupolis, Greece (*Does it depend on registration when searching for shape outliers? A worked example from cephalometrics*)
4. **2007/07: LASR 2007 - Systems Biology & Statistical Bioinformatics**, 4th - 6th July 2007, Leeds, UK (*Shape analysis in the light of simplicial depth estimators*)
5. **2007/03: 76th annual meeting of the American Association of Physical Anthropologists**, March 27- April 1 2007, Philadelphia, PA, USA (*Was it worth digitizing all those curves? A worked example from craniofacial primatology*)
6. **2006/09: V. sjezd společnosti soudního lékařství a soudní toxikologie**. September, 13 – 15, 2006, Brno, Czech Republic (*Správa o našej obehovej sústave – Information about our cardiovascular system*)
7. **2006/09: NEOBIOTA From Ecology to Conservation** - 4th European Conference on Biological Invasions Vienna (Austria), September 27 - 29 2006 (*Ontogenetic variability in external morphology of topmouth gudgeon (Pseudorasbora parva) from Bratislava, Slovakia*)
8. **2006/08: 13<sup>th</sup> anthropological days**. August 28-29, 2006 Olomouc, Czech Republic (*The influence of breastfeeding on somatic growth and development in children to one year of age*)
9. **2006/06: 2<sup>nd</sup> International Congress of Anthropology** - Human Evolution and Population Bio-Diversity in SE Europe, June 5-7, 2006. Athens, Greece (*Late Upper Palaeolithic skull from Moča, southern Slovakia, in light of recent skulls from Pachner collection: geometric morphometrics analysis*)
10. **2006/06: PROBASTAT 2006** - 5th International Conference on Probability and Statistics, June 5 - 9 2006, Smolenice Castle, Slovakia (*Comparison of simplicial depth estimators with some other estimators*)
11. **2006/04: Paleoanthropology Society Meeting** - April 24 - 26, 2006, San Juan, Puerto Rico (*Ontogenetic stress and kinship hypotheses of Upper Palaeolithic fossil sample from Předmosti (Czech Republic): reflections on the basis of cranial discrete traits*)
12. **2005/11: Anthropological Days**, Smolenice Castle, Slovakia
  - **Lecture 1: Shape differences in development of face in patients with clefts cured with/without nasal septum reposition: geometrical morphometry** (Tvarové rozdíly ve vývoji obličeje u pacientů s rozštěpý léčených s/bez repositione nosního septa: metoda geometrické morfometrie),
  - **Lecture 2: Upper Paleolithic skulls from Předmosti near Přerov in the light of recent and fossil populations** (Mladopaleolitické lebky z Předmostí vo svetle recentných a fosílnych populácií),
  - **Lecture 3: Evaluation of relationship between anthropometrical variables and genotype in CF patients in Slovakia** (Analýza vzťahov antropometrických parametrov a genotypu u pacientov s CF na Slovensku)
  - **Lecture 4: Evaluation of children physique with congenital hypothyreosis** (Sledovanie telesnej stavby detí s kongenitálnou hypotyreózou)
  - **Lecture 5: Body growth and development of children up to one year** (Telesný rast a vývin detí do jedného roku života)
  - **Lecture 6: The digital graphic analysis of facial skeleton of Upper Palaeolithic skulls from Předmostí near Přerov**
13. **2005/09: 3th Memorial of prof. J. Matiegka and prof. J. Malý**, September 22-23. 2005, Mělník, ČR (*Analýza tvaru obličejového skeletu u pacientů s celkovým jednostranným rozštěpem rtu a patra: metoda geometrické morfometrie*)
14. **2005/08: 26th Annual Conference of ISCB (International Society for Clinical Biostatistics)**, August 21-25, 2005, Szeged, Hungary



- Lecture 1: *LM and GLM in statistical analysis of relationship between anthropological measurements and variables of surviving in cystic fibrosis patients in Slovakia*,
  - Lecture 2: *Regression partitioning and statistical shape analysis in prediction of sagittal intermaxillary relations in patients with complete unilateral cleft lip and palate during puberty*
15. 2005/07: **Perspectives in Modern Statistical Inference III**, July 18-22, 2005, Mikulov, Czech Republic (*Two independent sample Hotelling  $T^2$  test using Bookstein 2D coordinates in statistical shape analysis: simulation study and applications*)
  16. 2005/06: **PRASTAN**, June 10-15 2005, Tajov, Slovak Republic (*Application of quasiperiodic time series to cardiology*)
  17. 2005/04: **European Geosciences Union, General Assembly 2005**, Vienna, Austria, 24 – 29 April 2005
    - Lecture 1: *Morphological plasticity of pumpkinseed (*Lepomis gibosus*, Linnaeus 1758) within the epigenetical context*
    - Lecture 2: *Epigenetical context in the life-history traits of round goby *Neogobius melanostomus* from Slovak stretch of the Danube*
  18. 2005/04: **74th Annual Meeting of the American Association of the Physical Anthropologists**, April 06-09, 2005, Milwaukee, Wisconsin, USA (*Comparison of Gravettian skulls from Predmostí with recent skulls from Pachner collection: roughness penalty approach in shape analysis*)
  19. 2005/02: **8th International Symposium for Cystic Fibrosis**, 4-5 February 2005, Charles University Hospital Prague – Motol (*Genotype – fenotype correlation – clinical impact of combination of severe and mild CFTR mutations*)
  20. 2004/12: **Computational Statistics 13**, Bratislava, Slovakia (*Problematic questions in analysis of categorical data*)
  21. 2004/11: Symposium **A Wider Europe in a new International Context**. Athens, Greece, 24.-28.11.2004 (*Public Finances in the Slovak Republic (SR) – Mathematical Point of View*)
  22. 2004/10: **IX. Kongres Slovenskej kardiologickej spoločnosti**, 7.– 9.10.2004, INCHEBA, Bratislava (*Je hostilita rizikový faktor kardiovaskulárnych ochorení?*)
  23. 2004/08: **COMPSTAT 2004**, 16th Symposium of IASC, Prague, Czech Republic (*Total variation penalty in image warping: some comparisons with Bookstein roughness penalty*)
  24. 2004/08: **32nd International Geological Congress**, Florence, Italy (Section G17.01 "Paleontology - Computer techniques in the modeling and analysis of biological form", growth and evolution; *Shape analysis of sexual dimorphism in upper paleolithic skulls from Predmosti (Czech Republic)*)
  25. 2004/06: **XVI. summer school of biometrics**, Račkova dolina, Pribylina, Slovakia (2 lectures: *Profile analysis with applications to electrocardiology, Selected statistical models in shape analysis*)
  26. 2004/06: **27th European Cystic Fibrosis Conference**, Birmingham, UK (*Relationship between anthropological measurements and variables of surviving in CF patients*)
  27. 2004/05: **Congress of health psychology** (Konferencia Psychologie zdraví Ceskomoravské psychologické společnosti s meziní účastí), Vernírovice pri Šumperku, CR
    - Lecture 1: *Behaviorálne, psychosociálne a endokrinné charakteristiky pracovného stresu u zdravotníkov;*
    - Lecture 2: *Hostilita a zdravie - fikcia alebo realita?*
  28. 2004/04: **Congress – Prevention of cardiovascular diseases in clinical practice** (Konferencia - Prevencia kardiovaskulárnych chorôb v klinickej praxi), SÚZA, Bratislava (*Hostilita u pacientov s ICHS po kardiochirurgickej intervencii - ako ďalej?*)
  29. 2003/12: **Computational Statistics 12**, Bratislava, Slovakia (*Normality in education of computer statistics: Q-Q plot with Atkinson's envelope*)
  30. 2003/11: **International Anthropological Congress: Memorial Congress to the 100th anniversary of birth of Prof. J.A.Valsik**
    - Lecture 1: *Geometric Analysis of Sexual Dimorphism in Upper Palaeolithic Skulls from Předmostí (Czech Republic);*
    - Lecture 2: *Application of regression trees in evaluation of ventricular repolarization parameters in groups of subjects with different blood pressure;*
    - Lecture 3: *Relationship between anthropological measurements and variables of surviving in Cystic Fibrosis Patients)*
  31. 2003/09: **7th International Symposium for Cystic Fibrosis**, Bratislava, Slovakia (*Registry of cystic fibrosis in Slovakia*)

32. 2003/06: **Percis III**, the third international percis fish symposium, July 20 - 24 2003, Medison, Wisconsin, USA (*Ontogenetic patterns and interspecific variability in external morphology of three sympatric *Gymnocephalus* species*)
33. 2002/12: **Computational Statistics 11**, Bratislava, Slovakia (*Statistical analysis of medical data: linear models and time series in cardiology*)
34. 2002/09: **23rd Annual Conference The International Society for Clinical Biostatistics**, Dijon, France (*Survival Analysis of Patients with Cystic Fibrosis in Slovakia*)
35. 2002/09: **XV. summer school of biometrics**, Lednice, Czech Republic (*Distance – based vs. coordinate – based PCA with application to growth changes of fishes*)
36. 2002/06: **Neuroscience in the third millennium**, X. International Congress of Czech and Slovak Neurochemical Society, Castá, Slovakia (*Behavioral, psychological and endocrine characteristics in nurses working at intensive care units*)
37. 2002/02: **ProbaStat 2002**, Smolenice, Slovakia (*Application of allometric shape analysis to fish growth with geometrical notes*)
38. 2001/12: **Computational Statistics 10**, Bratislava, Slovakia (*Computational aspects of estimates in survival analysis*)
39. 2001/09: **PRASTAN 2001**, Kočovce, Slovakia (*Biomedical aspects of inference procedures in survival analysis*)
40. 2001/09: **8th Demographical and Statistical Conference**, Rajecké Teplice, Slovakia (*Application of Cox regression model in analysis of clinic lethality of patients with acute cardiac infarction in Slovakia*)
41. 1998/09: **International Dendrologic Conference**, Piešťany, Slovakia (*Contribution to karyotaxonomy of chosen *Populus* species*)
42. 1997/09: **International Dendrologic Conference**, Banská Štiavnica, Slovakia (*Taxonomical comments to *Populus alba* aggr.*)

### 13) Invited lectures (#20)

1. 2007/11: **European Center for Medical Informatics, Statistics and Epidemiology of Charles University and Academy of Sciences of Czech Republic (EuroMISE centrum)**, 19.11.2007, Praha, ČR (*Geometrical aspects of statistical shape analysis and their interpretations with applications into biology*)
2. 2006/08: **XVII. Summer School of Biometrics**, August 21-25, 2006. Lednice, ČR (*Statistical Analysis of Designed Experiments*)
3. 2006/07: **Vienna MorphoFest 2006**. July, 11-22 2006. Vienna, Austria (*Total variation penalty vs TPS penalty in shape analysis: Local vs global; interpolation vs smoothing*)
4. 2006/06: Laboratory of Bioelectric Informations, Institute for Transmission Problems, **Russian Academy of Sciences**, Moscow, Russia (*Mathematical and Statistical Modeling in Spatial Electrocardiology*)
5. 2006/02: Department of Statistical Sciences, **University of Padova**, Padova, Italy (*Elastic and plastic splines: from theory to applications in biological sciences*)
6. 2005/12: **Carl von Ossietzky University Oldenburg**, Institut für Mathematik, Oldenburg, Germany (*Hotelling T2 tests in statistical shape analysis: from theory and MC simulations to applications in biological sciences*)
7. 2005/11: **University of Kassel**, Department of Mathematics and CS, Kassel, Germany (*Total variation penalty in statistical shape analysis: from implementation to S-PLUS, to MC simulations and applications*)
8. 2005/03: **Masaryk University**, Faculty of Natural Sciences, Department of Biostatistics, Brno, Czech Republic (*Statistical shape analysis, 3 lectures and 2 practicals*)
9. 2005/02: **Charles University**, Faculty of Natural Sciences, Department of Anthropology and Human Genetics, Prague, Czech Republic (*Statistical shape analysis, 4 lectures and 3 practicals for doctoral students*)
10. 2004/11: **Masaryk University**, Faculty of Natural Sciences, Department of Applied Mathematics, Brno, Czech Republic (*Penalized nonparametric regression model in shape analysis with applications to zoology and anthropology*)
11. 2004/06: **Carl von Ossietzky University Oldenburg**, Institut für Mathematik, Oldenburg, Germany (*Penalized regression models in shape analysis with applications to zoology and anthropology*)
12. 2004/06: **XVI. Summer School of Biometrics**, Pribylina - Račková dolina, Slovakia (*Selected statistical models in shape analysis, Profile analysis with applications to electrocardiology*)
13. 2004/06: **University of Bordeaux I**, Laboratoire d'Anthropologie des Populations du Passé, Talence, France (*Shape analysis: new statistical methods, open problems and selected applications to anthropology and zoology*)

14. 2004/03: **Charles University**, Faculty of Natural Sciences, Department of Anthropology and Human Genetics, Prague, Czech Republic (*Selected problems in shape analysis and applications to anthropology and zoology*)
15. 2004/03: **Charles University**, Faculty of Mathematics and Physics, Department of Probability and Mathematical Statistics, Czech Republic (*Nonparametric regression model with total variation penalty in shape analysis*)
16. 2004/ summer and winter term: **Institute of Normal and Pathological Physiology**, Department of Human Cardiovascular Physiology, Slovak Academy of Sciences (SAS), Bratislava, Slovakia (*Testing of Hypotheses in Biomedical Research, Statistical Models in Biomedical Research, lecture - cycle*)
17. 2003/03: **Louisiana State University**, Pennington Biomedical Research Centre, Department of Biostatistics, Baton Rouge, USA (*Statistical Analysis of Patients with Cystic Fibrosis in Slovakia*)
18. 2002/11: **Freiberg University of Mining and Technology**, Faculty of Mathematics and CS, Institute of Stochastics, Freiberg, Germany (*Shape Analysis: Geometrical PCA and deformation techniques*)
19. 2002/10: **Institute of Normal and Pathological Physiology**, Department of Cardiology, SAS, Bratislava, Slovakia (*Application of Mathematical Statistics to Biomedical Sciences*)
20. 2002/09: **XV. Summer School of Biometrics**, Lednice, Czech Republic (*Distance-based vs. coordinate-based PCA with application to growth changes of fishes*)



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Bratislava, 29.08.2007