

**VILNIAUS UNIVERSITETAS**  
**MATEMATIKOS IR INFORMATIKOS**  
**FAKULTETAS**

**VILNIUS UNIVERSITY**  
**FACULTY OF MATHEMATICS**  
**AND INFORMATICS**

Publications  
Report

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## DEPARTMENT OF MATHEMATICAL ANALYSIS\*

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Traditionally, the department gives courses in mathematical analysis (calculus) and related subjects. In recent years, the department, as responsible for bachelor and master programs in actuarial and financial mathematics, became more oriented toward applications and is offering main courses in actuarial and financial mathematics. The research areas of the department include heavy tailed distributions, time series, econometric and actuarial models, stochastic analysis.

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Professors of the department give courses on differential equations (ODEs and PDEs), numerical analysis, optimization methods, applied mathematics, calculus (at the faculties of Economics, Chemistry, and Natural Sciences), and various more specialized lectures. The main research fields of the department are ordinary and partial differential and integrodifferential equations, their numerical analysis, and applied mathematics.

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**P. Vaitkus.** Large-deviation probabilities. Neural networks. Nonlinear time series.

*Publications.* Journals with ISI SC Index – 6; Intern. reviewed journals, books, and ISI proceedings – 1; Lithuanian licensed issues – 4; Other journals and proceedings – 2.

## DEPARTMENT OF COMPUTER SCIENCE

<http://www.mif.vu.lt/katedros/cs>Welcome>

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The department supervises the education in informatics for the students in bachelor, master, and doctor programs. Research areas: neural networks, software process, semantics of programs, artificial intelligence, retrieval of logical proofs, error-correcting codes, service oriented frameworks and cloud computing, national language support, numerical modelling and visualization.

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## DEPARTMENT OF DIDACTICS OF MATHEMATICS AND INFORMATICS

<http://www.mif.vu.lt/katedros/mmk/index.html>

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## **DEPARTMENT OF COMPUTER SCIENCE II**

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## DOCTORAL THESES

1. **P. Banys.** Limit theorems for random linear fields via Beveridge–Nelson decomposition. Advisor prof. **V. Paulauskas**.
2. **E. Gaidamauskaitė.** Computational modeling of complex reactions kinetics in biosensors. Advisor prof. **R. Baronas**.
3. **J. Kočetova.** Analysis of the Gerber–Shiu discounted penalty function. Advisor prof. **J. Šiaulys**.
4. **A. Kolupajeva.** Value-distribution of twisted  $L$ -functions of normalized cusp forms. Advisor prof. **A. Laurinčikas**.
5. **K. Petrauskas.** Computational modelling of biosensors of complex geometry. Advisor prof. **R. Baronas**.
6. **J. Petrauskienė.** Poisson-type approximations for sums of dependent variables. Advisor prof. **V. Čekanavičius**.
7. **M. Pranckevičiūtė.** High-frequency data aggregation and Value-at-Risk. Advisor prof. **A. Račkauskas**.
8. **I. Rastenė.** Testing and estimating changed segment in autoregressive model. Advisor prof. **A. Račkauskas**.

# PUBLICATIONS

Abbreviations:

<i>LMR</i>	<i>Lietuvos Matematikos Rinkinys</i>
<i>LMJ</i>	<i>Lithuanian Mathematical Journal</i> *

## Monographs

1. **V. Bagdonavičius, J. Kruopis**, N. Nikulin, *Non-parametric Tests for Censored Data*, ISTE–Wiley, London, 2011, 233 p.
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A. Laurinčikas, see [31].  
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64. **A. Štikonas**, Investigation of characteristic curve for Sturm–Liouville problem with nonlocal boundary conditions on torus, *Math. Modelling Analysis*, 2011, **16**(1), p. 1–22.  
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Ž. Žilinskas, see [54].
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40. A. Pincevičius, **A. Domarkas**, S. Bekešienė, MAPLE in teaching mathematics at Military Academy of Lithuania.
41. A. Pincevičius, V. Jonevičius, **G. Misevičius**, Peculiarities of modeling the problem of outer ballistics.
42. **R. Pupeikis**, On recursive stopping of decimation of discrete-time band-limited signals.
43. **Š. Repšys, V. Skakauskas**, A parasite population model.
44. S. Roman, **A. Štikonas**, Green's function for discrete problems with nonlocal boundary conditions.
45. R. Rudalevičienė, **R. Kašuba**, Several simple remarks concerning the attractiveness and usefulness of “Kangaroo.”
46. **T. Rudys, A. Čiginas**, Approximations of the distribution of median in stratified samples.

47. **J. Rukšėnaitė, P. Vaitkus**, Application of composite indices to estimation of EU economics.
48. K. Saakian, **F. Ivanauskas**, Mathematical modeling of the biosensor with degradation.
49. **S. Sajavičius**, The weighted splitting finite-difference scheme for two-dimensional parabolic equation with nonlocal integral conditions.
50. **V. Skakauskas**, Some heterogeneous reactions models.
51. **V. Stakėnas, V. Kazakevičius**, Distributions of the order statistics of prime divisors of rational numbers.
52. **J.K. Sunklodas**, On approximation of a sum of a random number of summands by a normal distribution.
53. **O. Štikonienė**, On complex and negative eigenvalues of difference operator with nonlocal conditions.
54. **M. Vaičiulis**, A new estimator of the tail index of distribution.
55. **S. Zubė**, Quaternionic rational Bezier curves.
56. **Ž. Žilinskas, E. Manstavičius**, On the variance related to the Ewens sampling formula.

*Other conference reports*

*Abbreviations:*

Palanga-11	<i>Fifth International Conference In Honour of J. Kubilius “Analytic and Probabilistic Methods in Number Theory”, September 4–10, 2011, Palanga, Lithuania</i>
JArithm	<i>27th “Journées Arithmétiques”, June 27–July 1, 2011, Vilnius, Lithuania</i>
MMA-11	<i>XVI International Conference “Mathematical Modelling and Analysis,” May 25–28, 2011, Sigulda, Latvia</i>
LAS-Conf	<i>LAS Conference of Young Researchers “Interdisciplinary Research in Physical and Technological Sciences”, February 8, 2011, Vilnius</i>

1. **G. Alkauskas**, The map from the set of nontrivial zeros of the Riemann zeta function to the set of eigenvalues of the Gauss–Kuzmin–Wirsing operator, *JArithm*, Abstracts, Vilnius, 2011, p. 2.
2. **G. Alkauskas**, A survey of scales and timbres: Mathematics that has artistic appeal, *1st Intern. Conf. Music and Technologies, Kaunas Univ. of Technology, November 11–12, 2011, Kaunas, Lithuania*.
3. **G. Alkauskas**, Does the Minkowski question mark-world and theta constant-world intersect?, *Palanga-11*.
4. **V. Ašeris, R. Baronas, J. Kulys**, Computational modeling of biosensors utilizing parallel substrates conversion, *MMA-11*, Abstracts, 2011, p. 6.

5. **V. Ašeris**, Computational modelling of the biosensor with chemically modified electrode, *LAS-Conf*, 2011.
6. **G. Bareikis, A. Mačiulis**, On the second moment of an arithmetical process, *Palanga-11*.
7. **R. Baronas**, Ž. Ledas, R. Šimkus, Computational modeling of the bacterial self-organization in a circular container, *MMA-11*, Abstracts, 2011, p. 10.
8. **E. Bieliauskienė, J. Šiaulys**, Analysis of the ruin probability for insurance company in the case at inhomogeneous claims, *LAS-Conf*.
9. **M. Bloznelis**, Random intersection graphs, *Palanga-11*.
10. P. Borwein, S. Choi, **J. Jankauskas**, On a class of polynomials related to Barker sequences, *Heights 2011*, Tossa de Mar, Spain, 2011.
11. **S. Černigova**, On moments of the periodic zeta-function, *JArithm*, Abstracts, 2011, p. 14.
12. **V. Čyras**, F. Lachmayer, Legal machines and legal act production within multisensory operational implementations, *Law, Science, Technology: 25th IVR World Congr. Philosophy of Law and Social Philosophy, 15–20 August, 2011, Germany. Frankfurt am Main*, Abstracts, 2011, p. 251–252.
13. **V. Dagienė**, B. Haberman, H. Averbuch, A. Cohen, Work in progress – initiating the beaver contest on computer science and computer fluency in Israel, In: *Frontiers in Education: 41st ASEE/IEEE Conf., October 12–18, 2011, 5 Rapid city, USA*, p. 1–2.
14. **V. Dagienė**, School in a new millennium: What competencies we are going to develop? Transformations of education policy: National, transnational and supranational discourse, Vilnius Univ., *Education Department and Center of Education Policy*, November 11–12, 2011.
15. **V. Dagienė**, B. Haberman, A. Cohen, The beaver contest: Attracting youngsters to study computing, In: *Proc. 16th Annual Conf. Innovation and Technology in Computer Science IIiCSE'11, June 27–29, 2011, Germany, Darmstadt*, 2011, p. 378.
16. **P. Daniušis**, D. Janzing, J. Mooij, J. Zscheischler, B. Steudel, K. Zhang, B. Scholkopf, Inferring deterministic causal relations, *LAS-Conf*, 2011.
17. **P. Drungilas**, Sh. Akiyama, **J. Jankauskas**, **A. Dubickas**, Height reducing in number systems, *LAS-Conf*, 2011.
18. **P. Drungilas**, Sh. Akiyama, **J. Jankauskas**, Height reducing in number systems, *JArithm*, Abstracts, Vilnius, 2011, p. 16.
19. **P. Drungilas, J. Jankauskas**, Sh. Akiyama, Height reducing in number systems, *Paul Turan Memorial Conference, August 22–26, 2011, Budapest, Hungary*.
20. **A. Dubickas**, On metric heights of algebraic numbers, *Proc. Intern. Conf. “Diophantine approximation: state of the art and applications” July 3–July 9, 2011, Minsk*, p. 22–24.
21. **E. Gaigalas**, On the dimension of some spaces of generalized theta-series, *Palanga-11*.

22. **R. Garunkštis**, Zeros of the Estermann zeta-function, *MMA-11, Abstracts*, 2011, p. 46.
23. **R. Garunkštis**, J. Steuding, On the a-values of the Riemann zeta-function, *JArithm*, Abstracts, Vilnius, 2011, p. 22.
24. **R. Garunkštis, A. Grigutis**, On the zeros on the Lerch transcendent function and the polylogarithm function, *Palanga-11*.
25. **A. Grigutis, R. Garunkštis**, Zeros of the generalized polylogarithm function, *JArithm*, Abstracts, Vilnius, 2011, p. 23.
26. **A. Grigutis**, Zeros of the polylogarithm function, *MMA-11, Abstracts*, 2011, p. 51.
27. **J. Jankauskas, A. Dubickas**, On the intersection of infinite geometric and arithmetic progressions, *JArithm*, Abstracts, Vilnius, 2011, p. 29.
28. **J. Jankauskas**, On the intersection of infinite geometric and arithmetic progressions, *PIMS/SFU/UBC Number Th., Burnaby, Canada*, 2011.
29. **A. Javtokas**, On nonexistent numbers through Derrida's deconstruction perspective, *JArithm*, Abstracts, Vilnius, 2011, p. 30.
30. **J. Kalpokas**, Christ Thomas, Upper bounds for the moments of the Riemann zeta function and its derivatives on the critical line, *JArithm*, Abstracts, 2011, p. 31.
31. **J. Kalpokas**, Discrete moments of the Riemann zeta-function, *Palanga-11*.
32. **T. Kargina**, On additive functions defined on the symmetric group, *JArithm*, Abstracts, 2011, p. 31–32.
33. **A. Kolupayeva**, Some limit theorems with respect to a parameter, *JArithm*, Abstracts, Vilnius, 2011, p. 33.
34. **A. Kolupayeva**, Value-distribution of twisted L-functions of normalized Hecke eigen forms, *MMA-11, Abstracts*, 2011, p. 75.
35. B. Kryžienė, **G. Misevičius**, A limit theorem of the Erdős–Kac type, *Palanga-11*.
36. **V. Kurauskas**, Random graphs with disjoint forbidden minors, *Palanga-11*.
37. **V. Kvedaras**, Testing the functional restrictions on parameters in the MIDAS regressions, *5th CSDA Intern. Conf. on Computational and Financial Econometrics (CFE'11), December 17–19, 2011, Senate House, University of London, UK*, Abstracts, 2011, p. 95.
38. **V. Kvedaras**, Empirical testing of the export-led and BOP-constrained growth: The case of Portugal, *Conf. "Thirlwall's Law and Balance-of-Payments constrained growth," June 24–25, 2011, Faculty of Economics, University of Coimbra, Portugal*.
39. **A. Laurinčikas**, Approximation of analytic functions by shifts of zeta-functions, *MMA-11, Abstracts*, 2011, p. 79.
40. **A. Laurinčikas**, Some remarks on the joint universality of the Riemann and Hurwitz zeta-functions, *Palanga-11*.

41. **A. Laurinčikas**, Universality of the Hurwitz zeta function, *8th Intern. Algebraic Conf., July 5–12, 2011, Lugansk, Ukraine*, Abstracts, p. 35.
42. **A. Laurinčikas**, Extension of the class of universal functions, *JArithm*, Abstracts, 2011, p. 38.
43. **A. Laurinčikas**, Theorems related to joint universality of Hurwitz zeta functions, *Proc. Intern. Conf. “Diophantine approximation: state of the art and applications” July 3–July 9, 2011, Minsk*, p. 40–41.
44. **A. Laurinčikas**, Universality of composite functions, *VII Intern. Conf. Dedicated to 190-year anniversary of P.L. Chebyshev and 120-year anniversary of I.M. Vinogradov “Algebra and Number Theory: Modern Problems and Applications”, September 12–17, 2011, Saratov, Russia*, Abstracts, 2011, p. 85–86.
45. **R. Leipus**, Memory properties of aggregated autoregressive processes and fields, *9th Tartu Conf. Multivariate Statistics and 20th Intern. Workshop Matrices and Statistics, June 26–July 1, 2011, Tartu, Estonia*, Abstracts, 2011, p. 46.
46. **A. Mačiulis, G. Bareikis**, Cesaro means related to the square of divisor function, *JArithm*, Abstracts, 2011, p. 40.
47. **E. Manstavičius**, Some results in combinatorics influenced by probabilistic number theory, *JArithm*, Abstracts, 2011, p. 42–43.
48. **E. Manstavičius**, Limit theorems for additive functions defined on permutations, *Intern. Conf. “Limit theorems in probability and number theory”, January 14–15, 2011, Paderborn*, Abstracts, 2011, p. 13–14.
49. **E. Manstavičius**, Kubilius fundamental lemma on partitions, *Palanga-11*.
50. **J. Markevičiūtė**, The choice of dimension of high-frequency data smoothing, *LAS-Conf*, 2011.
51. **E. Mielkaitis, V. Paulauskas**, Estimates of convergence rate in CLT for linear random fields, *LAS-Conf*.
52. **G. Misevičius**, A joint limit theorem for  $L$ -functions of newforms, *JArithm*, Abstracts, 2011, p. 44.
53. **A. Mitašiūnas**, T. Woronowicz, D. We wetzer, M. Boronowsky, A sustainable value chain for public sector innovation by managing knowledge assets – A Baltic Sea Region case study, In; *Proc. XXII ISPIM Conf. Sustainability in Innovation: Innovation Management Challenges, June 12–15, 2011, Hamburg, Germany*, Hamburg, 2011.
54. **A. Novikas, J. Šiurys**, A binary linear recurrence sequence of composite numbers, *JArithm*, Abstracts, 2011, p. 46.
55. **D. Puplinskaitė**, K. Perilioglu, **D. Surgailis**, Asymptotic of the ruin probability with claims modeled by  $\alpha$ -stable aggregated  $AR(1)$  process, *LAS-Conf*, 2011.
56. **A. Račkauskas**, Linear processes with space varying memory, *5th CSDA Intern. Conf. Computational and Financial econometrics (CFE 2011), December 17–19, 2011, London*, Abstracts, 2011, p. 57.

57. **A. Račkauskas**, Ch. Suquet, Multivariate models with space varying memory, *9th Tartu Conf. Multivariate Statistics and 20th Intern. Workshop Matrices and Statistics, June 26–July 1, 2011, Tartu, Estonia, Abstracts*, 2011, p. 66.
58. **J. Rašytė**, Discrete universality of the Riemann zeta-function, *MMA-11, Abstracts*, 2011, p. 101.
59. **J. Rašytė**, Generalization of a discrete universality for the Hurwitz zeta-function, *Palanga-11*.
60. **Š. Repšys, V. Skakauskas**, A brood-parasites dynamics model, *8th Eur. Conf. “Mathematical and Theoretical Biology” and “Annual Meeting of the Society for Mathematical Biology”, June 28–July 2, 2011, Krakow, Abstracts*, 2011, p. 194–195.
61. **S. Sajavičius**, The finite-difference schemes for two-dimensional heat conduction equation with nonlocal conditions, *7th Intern. Congr. Industrial and Applied Mathematics, July 18–22, 2011, Vancouver, BC, Canada, Abstracts*, 2011, p. 78–79.
62. **S. Sajavičius**, The weighted finite-difference scheme for two-dimensional parabolic equation with four nonlocal integral conditions, *MMA-11, Abstracts*, 2011, p. 112.
63. **S. Sajavičius**, The weighted splitting finite-difference scheme for two-dimensional parabolic equation with nonlocal integral conditions, *LAS-Conf*, 2011.
64. **V. Skakauskas, P. Katauskis**, A. Skvortsov, A receptor-toxin-antibody interaction model, *Casablanca Intern. Workshop “Mathematical Biology: Analysis and Control”, June 20–24, 2011, Casablanca, Abstracts*, 2011, p. 55.
65. **V. Skakauskas, P. Katauskis**, A. Skvortsov, Modelling of receptor-toxin-antibody interaction, *Biomath 2011, Intern. Conf. “Mathematical Methods and Models in Biosciences and School for Young Scientists”, June 2011, Sofia*, p. 69.
66. **V. Skakauskas, P. Katauskis**, A. Skvortsov, Numerical study of receptor-toxin-antibody interaction problem, *8th Eur. Conf. Math. Theoret. Biology and Annual Meeting of the Society for Mathematical Biology, Kraków, June 28–July 2, Abstracts*, 2011, p. 256.
67. **V. Stakėnas**, The simultaneous rational approximations to the real and  $p$ -adic numbers, *JArithm*, Abstracts, p. 56.
68. **V. Stakėnas**, On the order statistics of prime divisors, *Palanga-11*.
69. **G. Stepanauskas, J. Šiaulys**, On limit distributions for additive prime indicators, *JArithm*, Abstracts, 2011, p. 58.
70. **G. Stepanauskas, J. Šiaulys**, Limit distributions of the sets of additive functions, *Palanga-11*.
71. **P. Šarka, A. Dubickas**, Sumsets of sparse sets, *JArithm*, Abstracts, 2011, p. 59.

72. **G. Šemetulskis, A. Dubickas**, On polynomials with at squares, *JArithm*, Abstracts, 2011, p. 60.
73. **R. Šimėnas, R. Garunkštis**, On the relationship between the zeros of the functions of the extended Selberg class and their derivatives, *JArithm*, Abstracts, 2011, p. 61.
74. **V. Zacharovas**, H. Y. Chen Louis, Hwang Hsien-Kuei, Y. T. Soon Spario, Distribution of the sum-of-digits function of random integers, *JArithm*, Abstracts, 2011, p. 64–65.
75. **V. Zacharovas**, A Tauberian theorem for Ingham summation method, *Palanga-11*.
76. **D. Zuokas**, V. Kaučas, T. Krilavičius, Š. Medelis, Extraction of textual data by statistical methods, *LAS-Conf*, 2011.
77. **A. Zinevičius**, On the average number of rational points of bounded height on hyperelliptic curves, *JArithm*, p. 66.
78. **Ž. Žilinskas**, On a variance related to the Ewens sampling formula, *Palanga-11*.

## Other lectures and reports

1. **M. Bloznelis**, Degree and clustering, *Utrecht University, The Netherlands*, November 2.
2. **M. Bloznelis**, Some new results for sparse Random intersection graphs, *Adam Mickiewicz University, Poznan, Poland*, December 6.
3. **R. Leipus**, Limiting behavior of randomly stopped sums in the presence of heavy tails with applications, *Universidad Carlos III de Madrid (Spain)*, January 21.
4. **V. Paulauskas**, On some generalizations of sectorial and relation with probability theory, *Seminar on Operator Theory*, Warsaw, IMPAN, March 5.
5. **V. Paulauskas**, Approximation of semigroups of operators and relation with probability theory, *Seminar on Functional Analysis*, Warsaw, IMPAN, March 8.
6. **V. Paulauskas**, On Beveridge-Nelson decomposition and limit theorems for continuous linear random processes and fields, *Probability seminar, Lille University*, March 16.
7. **V. Paulauskas**, On two problems connected with autoregressive random fields with low dimensional indices, *Probability Seminar, Vienna University*, December 5.
8. **D. Surgailis**, Three seminar talks: Nonhomogeneous fractional stochastic integration (discrete time); Nonhomogeneous fractional stochastic integration (continuous time); Two-sample tests for equality of long memory parameters. *Michigan State University, USA*, April 4–May 5.

## **SCIENTIFIC CONTACTS**

### **Participation in international projects**

1. **A. Čivilis**, CHANCE: COOPERATION – THEME 2: Food, Agriculture, Fisheries, and Biotechnology FP7-KBBE-2010-4 (prof. F. Capozzi, University of Bologna, Italy; prof. A. Abaravičius, VU), Grant Agreement No. 266331. Duration 2011–2013. <http://www.chancefood.eu>.
2. **V. Čyras, K. Lapin**. Secure, Trusted and Legally Ruled Collaboration Environment in Virtual Life (VirtualLife), 2008–2011.
3. **V. Dagienė**. Member of the editorial board of the International Journal of Instruction (<http://www.e-iji.net>).
4. **V. Dagienė**. International Steering Committee member of International Olympiad in Informatics with participation of over 80 countries (since 2006).
5. **V. Dagienė**. Project leader of the Partner – Vilnius University in the Consortium of Nordic Network for Engineering Education Research (NNEER). NordForsk programma, 2009–2013.
6. **V. Dagienė**. Expert for EU programme EUREKA Eurostars.
7. **V. Dagienė**. Member of the Committee on Doctoral studies of Education of Consortium leading by Lithuanian Educology University.
8. **V. Dagienė**. Member of the Committee on Doctoral studies of Education of Consortium leading by Vytautas Magnus University.
9. **V. Dagienė**. Chair of International Doctoral Consortium on Informatics engineering education research.
10. **V. Dagienė**. Member of the Board on General Education of the Ministry of Education and Science.
11. **V. Dagienė**. Vice chair of the TC3 Committee on Education at International Federation for Information Processing (IFIP), since 2007.
12. **V. Dagienė**. Vice chair of the SIG3.9, Special Interest Group on Digital Literacy at International Federation for Information Processing (IFIP).
13. **V. Dagienė**. Founder and head of the International Contests on Informatics and Computer Fluency BEBRAS (Beaver) with 26 countries involved.
14. **V. Dagienė**. Chair of International seminar “Informatics Fundamentals and Computer Fluency”, May 10–15, Druskininkai, 2011.
15. **S. Dapkūnas**. Tempus Project PERSEUS – Plan to Establish Research–Science–Enterprise oriented Universities for the Benefit of Society, TEMPUS 145171-2008-ES-SMHES, 2009–2011.
16. **A. Juozapavičius**. CERN–Lithuania Collaboration Project. 2007–2011.
17. **A. Juozapavičius**. EGI-InSPIRE, FP7 Project. 2010–2014.
18. **R. Kašuba**. A representative of the international commission on mathematical instruction (ICMI). <http://www.mathunion.org/ICMI/>
19. **R. Krasauskas**. SAGA FP7: Programme “People,” Marie Curie Action “Initial Training Networks.” 2008–2012.

20. **R. Krasauskas.** ShApes, Geometry and Algebra (SAGA) 2008–2012. Seventh Framework Programme.
21. **E. Manstavičius.** Member of the mathematics/engineering panel of ERA; “Marie Curie Actions”, Programme “People”.
22. **M. Manstavičius.** Project leader “The renewal of Econometrics and Financial and Actuarial mathematics study programs and its adaptation to international market”. 2011–2013.
23. **A. Mitašiūnas.** Advisory Board member, author, and reviewer of worldwide project Enterprise SPICE with participation of 108 experts from 30 countries and 5 continents.
24. **A. Mitašiūnas.** Project leader of the Partner – Vilnius University in the Consortium of Grant Contract for the implementation of the project #007, Baltic Organization and Network of Innovation Transfer Associations, BONITA of the Baltic Sea Region Programme 2007–2013.
25. **A. Mitašiūnas.** Participates in the PERSEUS project as an international expert in cooperation between teaching and research, adapting university curricula to the needs of industry and business. The PERSEUS project aims to extend regional cooperation within higher education, research, and business. This can imply strengthening relations between teaching and research, adapting university curricula to the needs of industry and business, and/or having businesses heighten investment in research.
26. **A. Mitašiūnas.** Represents the department in the Informatics Europe – association of computer science departments of universities and research laboratories, public and private, in Europe and neighboring areas. The mission of Informatics Europe is to foster the development of quality research and teaching in information and computer sciences.
27. **A. Mitašiūnas.** Expert of Tempus IV Project “Plan to Establish Research-Science-Enterprise oriented Universities for the benefit of Society”.
28. **A. Mitašiūnas.** Baltic Organisation and Network of Innovation Transfer Associations (BONITA) 2009–2012.
29. **V. Paulauskas.** Bilateral Lithuania–France research program: Gilibert, project *Statistical Inferences and Limit Theorems of Random Processes and Fields*. (Vilnius and Lille Universities). 2011–2012.
30. **V. Tumasonis.** Taking part in Unicode Consortium for developing the Unicode Standard.

## Visits by staff

1. **G. Bareikis.** University Constantin Brancoveanu, Romania, April 11–17.
2. **M. Bloznelis.** Atlanta, USA. May 22–31.
3. **M. Bloznelis.** Bedlewo, Poland. June 12–18.
4. **M. Bloznelis.** Bielefeld, Germany. August 3–6.
5. **M. Bloznelis.** Budapest, Hungary. August 21–27.
6. **M. Bloznelis.** Utrecht University, The Netherlands. November 26–27.
7. **M. Bloznelis.** Poznan, Poland. October 26–November 11; November 27–December 16.
8. **V. Dagienė.** Visiting professor at Aalto university, Helsinki, Finland. Teaching Doctoral course: T-106 Special course in Computing Education Research. November 10–21, 2010–January 3–11, 2011.
9. **V. Dagienė.** Visiting professor at ETH, Zurich, Switzerland. January–February 2011.
10. **V. Dagienė.** Visiting professor at Munster University, Germany. September 10–18, 2011.
11. **V. Dagienė.** Visiting professor at Comenius University, Bratislava, Slovakia. October 20–30, 2011.
12. **R. Garunkštis.** University of Würzburg, Germany. Visiting professor. October 1–30.
13. **V. Kurauskas.** Freie University, Berlin, Germany. Invited talk *Random graphs with few disjoint excluded minors*. June 18–22.
14. **V. Kurauskas.** Jagiellonian University, Krakow, Poland. December 11–16.
15. **V. Kvedaras.** Trade, Growth, and Wages – Lectures and Workshop, Johannes Gutenberg Universitaet, Mainz, Germany. August 29–September 2.
16. **A. Laurinčikas.** Research Institute for Mathematical Sciences, Kyoto, Japan. Visiting professor. September 10, 2011–February 8, 2012.
17. **R. Leipus.** Universidad Carlos III de Madrid, Spain. January 20–23.
18. **E. Manstavičius.** Meeting of presidents of national societies of mathematicians, celebration of the Jubilee of the Royal Spanish Mathematical Society, Barselona and Bilbao. May 3–9.
19. **J. Markevičiūtė.** University of Science and Technology (Lille 1), Lille, France. Cotutorial theses visit. January 31–April 29.
20. **J. Markevičiūtė.** University of Science and Technology (Lille 1), Lille, France. Visit with the bilateral Lithuania–France research program Gilibert. September 5–17.
21. **V. Paulauskas.** Warsaw, IMPAN. Two seminar talks. March 4–9.
22. **V. Paulauskas.** Lille, France, Lille University. Seminar talk. March 13–27.
23. **V. Paulauskas.** University of Vienna, Austria. Seminar talk. December 4–6.
24. **D. Puplinskaitė.** Nantes University, Prance. Cotutorial theses visit. January 31–April 29.

25. **G. Stepanauskas.** IT Meeting: Motivation Projects (MPRO), Gerloss, Austria. March 8–12.
26. **G. Stepanauskas.** Milan University, Italy. May 10–15.
27. **G. Stepanauskas.** EMS-RSME Joint Mathematical Weekend, Bilbao, October 6–11.
28. **D. Surgailis.** Michigan State University, USA. April 4–May 5.
29. **D. Surgailis.** The 33rd Finnish Summer School on Probability Theory and Statistics, Päivölä, Finland, June 6–10. Visiting professor. Six-lecture course *Modeling and Estimation of Stationary and Nonstationary Long Memory*.
30. **V. Zacharovas.** Institute of Statistical Science, Academia Sinica, Taiwan. November 2, 2010–January 30, 2011.
31. **V. Zacharovas.** Institute of Statistical Science, Academia Sinica, Taiwan. July 2–August 12.

### Foreign visitors

1. Anorgul Ashirova, Urgench State University, Uzbekistan. Doctoral student. February–May.
2. Thomas Christ, University of Würzburg, Germany. Doctoral student. September–December.
3. Prof. Yurii Davydov, Lille 1 University, France. July 8–27.
4. Lasse Hakulinen, Marianne Matilainen, Aalto University, Helsinki, Finland. Doctoral student. April 20–30.
5. Prof. Raphael Lachieze-Rey, Lille University, France. July 11–18.
6. Frédéric Lavancier, Nantes University. June.
7. Prof. Tomasz Luczak, Adam Mickiewicz University, Poznan, Poland. May 9–15.
8. Prof. Laurence Marsalle, Lille University, France. May 2–13.
9. Prof. Masumi Nakajima, Kagoshima University. One-year stay (up to August 18, 2011).
10. Prof. Ingram Olkin, Stanford University. June.
11. Prof. Noa Ragonis, Beit Berl Israel Institute of Technology (Technion). October 20–27.
12. Yang Yang, School of Mathematics and Statistics, Nanjing Audit University. February–August.

## GRANTS, AWARDS

1. **G. Alkauskas, E. Manstavičius.** Lithuanian State Science grant “Analytic, combinatorial, and dynamical methods in number theory: Automorphic forms, discrete structures, and structure constants”. 2011–2012.
2. **R. Baronas**, V. Ašeris, I. Bratkovskaja, E. Gaidamauskaitė, J. Kulys, A. Lančikas, K. Petrauskas, J. Razumienė, D. Šimelevičius, A. Žilinskas, VP1-3.1-MM-07-K-01-073: Developing computational techniques, algorithms and tools for efficient simulation and optimization of biosensors of complex geometry. 2011–2015.
3. **M. Bloznelis, V. Kurauskas**, Lithuanian Science Council grant “Random graphs”. 2011–2012.
4. **A. Brilingaitė, L. Bukauskas, A. Čivilis**, G. Krušinskas. IT PRAKTIKA: Design and implementation of the model to organize student internship. 2009–2012.
5. **L. Bukauskas**, A. Čepienė. Tuning national concept of European Credit Transfer System (ECTS): The development and implementation of credit harmonization and learning outcome based study programme methodologies. 2010–2012.
6. **L. Bukauskas**. Implementation of the information infrastructure for mobile and wireless services (MOBAS), 2011.
7. **V. Dagienė**. ETH (Switzerland) Award, the honorary gold medal for contributions to School Informatics in Europe (2011).
8. **A. Dubickas, P. Drungilas**. Lithuanian State Science grant “Constructive counting systems for algebraic numbers”. 2009–2011.
9. **R. Garunkštis**. Lithuanian State Science grant Project of Research Council of Lithuania “Investigation of zeta-functions”. 2010–2011.
10. **A. Juozapavičius**. LitGRID: Parallel and Distributed Computation and e-Services Network. Financed by Ministry of Education and Science, investment program. 2007–2012.
11. **A. Juozapavičius**. Speech recognition of medical diagnosis and conversion to text. 2011–2013.
12. **V. Paulauskas**. Lithuanian State Science grant “Statistical decisions and limit theorems for random processes and fields”. 2011–2012.
13. **K. Pileckas**. MIP-11044: Boundary-value problems for Navier–Stokes systems in unbounded domains. 2011–2012.
14. **Š. Raudys**. Lithuanian State Science grant “Recognition methods for safety and risk analysis with evaluation of costs of several class errors”. 2011–2012.

## NAME INDEX

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