

List of Publications

Dmitry V. Khmelev

October 9, 2001

Candidate Thesis

D.V.Khmelev. Zakony bol'shikh chisel i global'naya asimptoticheskaya ustojchivost' v setyah massovogo obsluzhivaniya [Laws of large numbers and global asymptotic stability in queueing networks]. Moscow, 2001.

Supervisor: Professor L.G. Afanassieva

PhD Thesis

Khmelev D.V. Rigidity Theory for Circle Homeomorphisms with Singularities. Cambridge/Edinburgh, 2002.

Supervisor: Professor K. Khanin

PUBLICATIONS IN REFEREED JOURNALS

1. Khmelev D.V. Reconstruction of linear index expressions for reducing programs to a linear class//Zhurnal Vychislitel'noĭ Matematiki i Matematicheskoi Fiziki. Rossiĭskaya Akademiya Nauk, 1998, vol.38, pp.532–544. Translated in “Computational Mathematics and Mathematical Physics”, 1998, vol. 38, No.3, pp.513–525.
2. Khmelev D.V. Limiting theorems for asymmetrical transportation networks//Fundamental and Applied mathematics, 2001, vol.7, no.4, pp. 1259–1266
3. Oseledets V.I., Khmelev D.V. Stochastic transportation networks and the stability of dynamical systems//Teoriya Veroyatnostei i ee Primeneniya,

2001, v.46, No.1, pp.147–154. Translated in ‘Theory of Probability and its Applications’.

4. Oseledets V.I., Khmelev D.V. Global stability of infinite systems of nonlinear differential equations, and non-homogeneous countable Markov chains (in Russian)[Global’naya ustoychivost’ beskonechnykh system nelineynykh differentsial’nykh uravnenii]//Problemy Peredachi Informatsii, 2000, vol.36, no.1, pp.60–76. Translated in “Problems of Information Transmission”, 2000, vol.36, no.1, pp.54–70

5. Khmelev D.V. Markov chains and classification of text passages. (in Russian) [Raspoznavaniye avtora teksta s ispol’zovaniyem cepei A.A. Markova] Vestnik MGU, Ser.9:Philologiya, No 2, 2000, pp. 115–126.

6. Khmelev D.V. Disputed Authorship Resolution through Using Relative Empirical Entropy for Markov Chains of Letters in Human Language Text//Journal of Quantitative Linguistics, 2000, Volume 7, No 3, pp.201–207.

7. Kukushkina O.V., Polikarpov A.A., Khmelev D.V., Using Literal and Grammatical Statistics for Authorship Attribution (in Russian) [Opredeleniye avtorstva teksta s ispol’zovaniyem bukvennoi i grammaticheskoi informacii]//Problemy Peredachi Informatsii, 2001, vol.37, no.2, pp.96–108. Translated in “Problems of Information Transmission”, pp. 172–184.

8. Khmelev D., Tweedie F. Using Markov Chains for Identification of Writers//Literary and Linguistic Computing, 2001, vol.16, no.4, pp.299–307.

9. Khanin K., Khmelev D., Rybko A., Vladimirov A. Steady solutions for FIFO networks//Moscow Mathematical Journal, vol.1, no.3, pp.407–419.

10. Khmelev D.V., Spodarev E. Infinite closed Jackson networks. Proceedings of the Seminar on Stability Problems for Stochastic Models, Part III (Nalęczow, 1999). J. Math. Sci. (New York) 106 (2001), no. 2, 2820–2829.

11. Khmelev D., Teahan W. Comment. Phys. Rev. Lett., 90(8), 2003.

12. Khanin K., Khmelev D. Renormalizations and Rigidity Theory for Circle Homeomorphisms with Singularities of the Break Type. Periodic Rotation Numbers. “Communications in Mathematica Physics” Volume 235, Number 1, April 2003. pp. 69 - 124.

13. Vladimirov A., Oseledets V.I., Rybko A. Khanin K.M., Khmelev D.V. A Nonlinear Generalization of Perron’s theorem. “Doklady Mathematics”, Vol.67, No. 2, 2003.

14. Khmelev D., Teahan W. A repetition based measure for verification of text collections and for text categorization. SIGIR'2003, July 28–August 1, 2003, Toronto, Canada.
15. Khmelev D. Periodic trajectories for homeomorphisms of the circle with two break-type singularities. Submitted to “Ergodic Theory and Dynamical Systems”
16. Khanin K., Khmelev D., Sobolevskii A. On velocities of Lagrangian minimizers. Submitted to Moscow Mathematical Journal.

PROCEEDINGS AND PREPRINTS

1. Afanassieva L.G., Khmelev D.V. Large transportation networks with finite-dimensional state space. Asymptotic approach//Proc. of 7th Vilnius Conference on Math. Stat., 1998.
2. Afanassieva L.G., Khmelev D.V. Large transportation networks with a finite-dimensional state space//Teorija Verovatnostei i ee Primenenija 1999, vol.44, N1, p.157–158. Translated to English in “Theory of Probability and its Applications” 1999, vol.44, N1, p.142–143.
3. Khmelev D.V., Oseledets V.I. Mean-field approximation for stochastic transportation network and stability of dynamical system//Technical Report 445, University of Bremen, June 1999. Preprint.
4. Khmelev D., Spodarev E. Stability of infinite closed Jackson networks//XX International Seminar on Stability Problems for Stochastic Models, Lublin – Naleczow, 5-11 September, 1999, Abstracts, p.85.
5. Khmelev D., Polikarpov A.A. Basic Assumptions about a Sign’s Life Cycle for Mathematical Modelling of Language System Evolution//Proceedings of the fourth conference of the International Quantitative Linguistics Association edited by R.H. Baayen. Prague, August 24-26, 2000.
6. Khmelev D. Disputed Authorship Resolution Using Relative Empirical Entropy For Markov Chain of Letters in a Text//Proceedings of the fourth conference of the International Quantitative Linguistics Association edited by R.H. Baayen. Prague, August 24-26, 2000.
7. Khmelev D.V., Spodarev E. Infinite closed Jackson networks. Technical Report Math/Inf/00/07, Friedrich-Schiller-Universität Jena, April 2000. Published in the Journal of Mathematical Sciences (New York), for exact reference see above.

8. Khmelev D., Spodarev E. “Non-homogeneous zero-range interaction processes”, resume of the contribution to the XX Seminar on Stability Problems for Stochastic Models, Lublin - Naleczow, september 5-11 1999.
9. Khmelev D.V. Complexity Approach to Disputed Authorship Attribution (In Russian: Slozhnostnoi podkhod k zadache opredeleniya avtorstva)//Proceedings of the International Congress “Russian Language: Contemporaneity and Fates in History”, pp.426-427, Moscow, March 2001.
10. Khmelev D., Teahan W. Comment on Reply. <http://www.arxiv.org, cond-mat/0303261>
11. Khmelev D. Periodic Trajectories for Homeomorphisms of The Circle With Break-Type Singularities. Published in proceedings for “Kolmogorov and Contemporary Mathematics”, Moscow, 2003, p.58.
12. Khmelev D. On Convergence To Equilibrium of Infinite Closed Jackson Networks. Published in proceedings for “Kolmogorov and Contemporary Mathematics”, Moscow, 2003, p.466.
13. Malyutov M.B. , Khmelev D. Statistical Anomaly In The First Bi-Lines Of Shakespeare Sonnets. Published in proceedings for “Kolmogorov and Contemporary Mathematics”, Moscow, 2003, p.490.
14. Sobolevskii A., Khanin K., Khmelev D. A variational approach to the Burgers turbulence in an unbounded domain. Published in proceedings for “Kolmogorov and Contemporary Mathematics”, Moscow, 2003, p.757.
15. Khanin K., Khmelev D., Sobolevskii A. A blow-up Phenomenon in the Hamilton–Jacobi Equation in an Unbounded Domain. Proceedings of “Idempotent Mathematics and Mathematical Physics” workshop at the Erwin Schrödinger Institute in Vienna, 2003. To appear in “Contemporary Mathematics” series of AMS.
16. Khmelev D.V. Burrows-Wheeler Transformation, suffix array, and compression of dictionaries//The winner of the contest for the best compression-related paper at <http://compression.ru>.

IN PREPARATION

1. Khmelev D. Relaxation to equilibrium of an essentially finite zero-range process. (2002)
2. Khmelev D.V., Teahan W.J. Relative entropy estimators for multiple-choice classification. (2002)

UNPUBLISHED MANUSCRIPTS

1. Khmelev D.V. On program “Repetitor”//http://zhurnal.lib.ru/h/hmelew_d_w/
2. Khmelev D. Rational Rotation Numbers for Homeomorphisms with Two Break-type Singularities.
3. Khmelev D.V. A couple of notices on strict non-uniform contraction.
4. Khmelev D., Teahan W. How to Publish a Comment in PRL. True story.
5. Khmelev D.V. Infinite Assymmetric Closed Jackson Network: convergence to equilibrium.