

# Papers

by Senya Shlosman

July 8, 2017

## References

- [1] S. Shlosman: *Manifolds of codimension one and simple homotopic type*, Mat. zametki, **12** (1972), 167–175.
- [2] S. Shlosman: *The topology of the Poincaré complexes*, Izvestija AN SSSR, Ser. Math., **37** (1973), 917–930.
- [3] R.L. Dobrushin and S. Shlosman: *Absence of breakdown of continuous symmetry in two-dimensional models of statistical physics*, Comm. Math. Phys. **42** (1975), 31–40.
- [4] S. Shlosman: *Limit theorem of the probability theory on compact Lie group*, Dokl. Acad. Nauk SSSR, **222** (1975), 306–308.
- [5] S. Shlosman: *Absence of continuous symmetry breaking in two-dimensional models of statistical physics*, Theor. and Math. Phys., **33**(1977), 897-902.
- [6] S. Shlosman: *Decay of correlations in two-dimensional models with continuous symmetry group*, Theor. Math. Phys. **37** (1978), no. 3, 1118-1121 (1979).
- [7] S. Shlosman: *Correlation inequalities and their applications. A review*, Itogi nauki, Series: Probability Theory, Mathematical Statistics, Theoretical Cybernetics, VITINI, Vol. **16**(1978), 33-65.
- [8] P.Major and S. Shlosman: *A local limit theorem for the convolution of probability measures on a compact connected group*, Z. Wahrsch. verw. Gebiete, **50**(1979), 137-148

- [9] S. Shlosman: *Continuous models with continuous symmetries in two dimensions*, Random fields, Vol. I, II (Esztergom, 1979), 949–966, Colloq. Math. Soc. Janos Bolyai, 27, North-Holland, Amsterdam-New York, 1981
- [10] S. Shlosman: *Correlation inequalities for antiferromagnets*, J. Stat. Phys. **22**(1980), 59-64.
- [11] S. Shlosman: *Phase transitions for two-dimensional models with isotropic short range interactions and continuous symmetry*, Comm. Math. Phys. **71**(1980), 207-212
- [12] R.L. Dobrushin and S. Shlosman: *Nonexistence of one- and two-dimensional Gibbs fields with noncompact group of continuous symmetries*, In: Multicomponent random systems, pp. 199–210, Adv. Probab. Related Topics, 6, Dekker, New York, 1980
- [13] S. Shlosman: *Limit theorem of probability theory for compact topological group*, Theor. Prob. and Appl., **25**(1981), 604-609
- [14] R.L. Dobrushin and S. Shlosman: *Phases corresponding to the local minima of the energy*, Selecta Math. Soviet. 1 (1981), no. 4, 317–338
- [15] I.Barany, S. Shlosman and A.Szucs: *On a topological generalization of a theorem of Tverberg*, J. London Math. Society (2), 23 (1981), 158-164
- [16] R.Kotecky and S. Shlosman: *First-Order Phase Transitions in Large Entropy Lattice Models*, Commun. Math. Phys., **83**, 493-515, 1982. Also: R. Kotecky and S.B. Shlosman, Existence of first-order transitions for Potts models, In: S. Albeverio, Ph. Combe, M. Sirigue-Collins (eds.), Proc. of the International Workshop—Stochastic Processes in Quantum Theory and Statistical Physics, Lecture Notes in Physics 173, 248–253, Springer-Verlag, Berlin-Heidelberg-New York, 1982.
- [17] S. Shlosman: *Non-translation-invariant states in two dimension*, Comm. Math. Phys., 87(1983), 497-504.
- [18] S. Shlosman: *Reflection positivity and models with unbounded spins*, Theor. Math. Phys., 59(1984), 154-160

- [19] S. Shlosman: *The influence of the non-commutativity on limit theorems*, Z. Wahrsch. verw. Gebiete, 65(1984), 627-636.
- [20] R.L. Dobrushin and S. Shlosman: *Constructive criterion for the uniqueness of the Gibbs field*, In: Statistical physics and dynamical systems (Kozzeg, 1984), 347–370, Progr. Phys., 10, Birkhouser - Boston, Mass., 1985
- [21] R.L. Dobrushin and S. Shlosman: *Completely analytical Gibbs fields*, In: Statistical physics and dynamical systems (Kozzeg, 1984), 371-404, Progr. Phys., 10, Birkhouser - Boston, Mass., 1985
- [22] R.L. Dobrushin and S. Shlosman: *The problem of translation-invariance of Gibbs states at low temperatures*, Mathematical physics reviews, Vol. 5, 53–195, Soviet Sci. Rev. Sect. C: Math. Phys. Rev., 5, Harwood Academic Publ., Chur, 1985
- [23] R.L. Dobrushin, J. Kolafa and S. Shlosman: *Phase diagram of the two-dimensional Ising antiferromagnet (computer assisted proof)*, Comm. Math. Phys. 102(1986) 89-103
- [24] S. Shlosman: *The Method of Reflection Positivity in the Mathematical Theory of First-Order Phase Transitions*, Uspekhi Mat. Nauk 41 (1986), no. 3(249), 69–111, English translation: Russian Math. Surveys, 41:3, 83-134, 1986.
- [25] S. Shlosman: *Uniqueness and half-space nonuniqueness of Gibbs states in czech models*, Teor. Mat. Fiz., 66:3 (1986), 430-444
- [26] S. Shlosman: *Unusual analytical properties of some lattice models: complimentary part to the Lee-Yang theory*, Teor. Mat. Fiz., 69:2 (1986) 273-278
- [27] S. Shlosman: *Signs of the Ising model Ursell functions*, Comm. Math. Phys., 102 (1986) 679-686
- [28] S. Shlosman: *Graph coloring: a way to variety of new correlation inequalities*, VIIIth international congress on mathematical physics (Marseille, 1986), 839–847, World Sci. Publishing, Singapore, 1987

- [29] E.Pecherski and S. Shlosman: *Low-temperature phase transitions in systems with one ground state*, Teor. Mat. Fiz., 70:3 (1987) 325-330
- [30] S. Shlosman: *Random graph representations and signs of the Ursell functions*, Dokl. Akad. Nauk SSSR, 292:5 (1987), 1074-1107
- [31] S. Shlosman: *Bounds on the Ursell functions for attractive random fields*, Dokl. Akad. Nauk SSSR, 294:6 (1987) 1354-1357
- [32] R.L. Dobrushin and S. Shlosman: *Completely Analytical Interactions: Constructive description*, J. Stat. Phys., **46**, 983-1014, 1987.
- [33] R.L. Dobrushin and S. Shlosman: *Thermodynamic inequalities for the surface tension and the geometry of the Wulff construction*, In: Ideas and methods in quantum and statistical physics (Oslo, 1988), 461–483, Cambridge Univ. Press, Cambridge, 1992
- [34] S. Shlosman: *Gaussian behavior of the critical Ising model in dimensions  $> 4$* , Dokl. Akad. Nauk SSSR, 303:6 (1988) 1350-1352
- [35] S. Shlosman: *Relations between the semiinvariants for the attractive random fields*, Teor. Ver. Appl., 33:4 (1988) 694-705.
- [36] R.L. Dobrushin, R. Kotecky and S. Shlosman: *Equilibrium crystal shapes - a microscopic proof of the Wulff construction*, Stochastic methods in mathematics and physics (Karpacz, 1988), 221–229, World Sci. Publishing, Teaneck, NJ, 1989
- [37] S. Shlosman: *Gauge invariant description of gauge fields*, Teor. Mat. Fiz., 77:1 (1988), 77-87
- [38] S. Shlosman: *Wulff construction justified*, IXth International Congress on Mathematical Physics (Swansea, 1988), 384–387, Hilger, Bristol, 1989
- [39] S. Shlosman: *The droplet in the tube: a case of phase transition in the canonical ensemble*, Comm. Math. Phys., 125:1 (1989), 81-90
- [40] Ch. Maes and S. Shlosman: *Ergodicity of probabilistic cellular automata: a constructive criterion*, Comm. Math. Phys., 135(1991), 233-251

- [41] L.Laanait, A. Messenger, S. Miracle-Sole, J. Ruiz and S. Shlosman: *Interfaces in Potts model. I. Pirogov-Sinai theory of the Fortuin-Kasteleyn representation*, Comm. Math. Phys., 140(1991), 81-91
- [42] A. Messenger, S. Miracle-Sole, J. Ruiz and S. Shlosman: *Interfaces in Potts model. II. Antonov rule and the rigidity of the order-disorder interface*, Comm. Math. Phys., 140(1991), 275-290.
- [43] R.L. Dobrushin and S. Shlosman: *Large deviation behavior of statistical mechanics models in the multiphase regime*. Proceedings of the X-th Congress on Math.Phys., Leipzig 1991, K.Schmudgen ed., 328–332, Springer, Berlin, 1992.
- [44] R.L. Dobrushin, R. Kotecky and S. B. Shlosman: *Wulff construction: a global shape from local interaction*, AMS translations series, Providence (Rhode Island), 1992.
- [45] Ch. Maes and S. Shlosman: *Constructive criteria for the ergodicity of interacting particle systems*, Cellular automata and cooperative systems (Les Houches, 1992), 451–461, NATO Adv. Sci. Inst. Ser. C Math. Phys. Sci., 396, Kluwer Acad. Publ., Dordrecht, 1993.
- [46] Ch. Maes and S. Shlosman: *When is an interacting particle system ergodic?* Comm. Math. Phys., 151(1993), 447-466.
- [47] S. Shlosman: *Simple random walks: new developments*, In: Proceedings of the NATO Advanced Research Workshop ” On three levels. Micro, meso and macroscopic approaches in physics”, M. Fannes, Ch. Maes, A. Verbeure ed., Leuven, Belgium, 1993. NATO ASI Series, Series B: Physics v.324, 233-237.
- [48] R. L. Dobrushin, R. Kotecky and S. Shlosman: *A microscopic justification of the Wulff construction*, Journal of Stat. Phys., 72(1993), 1-14
- [49] R. L. Dobrushin and S. Shlosman: *Large and moderate deviations in the Ising model*, In: ”Probability contributions to statistical mechanics”, R. L. Dobrushin ed., ”Advances in Soviet Mathematics”, v. 18, pp.91–220, AMS, Providence, RI, 1994

- [50] R. L. Dobrushin and S. Shlosman: *Droplet condensation in the Ising model: moderate deviations point of view*, Proceedings of the NATO Advanced Study Institute: "Probability theory of spatial disorder and phase transition", G. Grimmett ed., Kluwer Academic Publishers, vol. 20, pp. 17–34, 1994
- [51] K. Khanin, A. Mazel, S. Shlosman and Ya. Sinai: *Loop condensation effects in the behavior of the random walks*, In: The Dynkin Festschrift. Markov processes and their applications. M.I. Freidlin, ed., Progress in Probability, v.34, Birkhauser, 167-184, 1994
- [52] R.H. Schonmann and S. Shlosman: *Complete analyticity for 2D Ising completed*, Commun. Math. Phys., v.170(1995), 453-482
- [53] L. Chayes, R.Kotecky and S. Shlosman: *Aggregation and Intermediate Phases in Dilute Spin-Systems*, Commun. Math. Phys., **171**, 203-232, 1995.
- [54] R.H. Schonmann and S. Shlosman: *Constrained variational problem with applications to the Ising model*, J. Stat. Phys. 83(1996), 867–905
- [55] R.L. Dobrushin and S. Shlosman: *Gibbs description of the non-Gibbs fields*, Russian Math. Surveys, 52 (1997), 285-297
- [56] A.C.D. van Enter, R. Fernandez, R. Schonmann and S. Shlosman: *Complete analyticity of the 2D Potts model above the critical temperature*, Commun. Math. Phys. **189**, 373-393, 1997.
- [57] L. Chayes, R.Kotecky and S. Shlosman: *Staggered Phases in Diluted Systems with Continuous Spins*, Commun. Math. Phys., **189**, 631-640, 1997.
- [58] R. H. Schonmann and S. Shlosman: *Wulff droplets and the metastable relaxation of the kinetic Ising models*, Comm. Math. Phys., **194**, 389-462, 1998.
- [59] A.C.D. van Enter and S. Shlosman: *(Almost) Gibbsian description of the sign-fields of SOS-fields*, J. Stat. Phys., **92**, 353-368, 1998.
- [60] R.L. Dobrushin and S. Shlosman: *"Non- Gibbsian" states and their Gibbs description*, Comm. Math. Phys., **200**, 125- 179, 1999.

- [61] A.C.D. van Enter, Ch. Maes and S. Shlosman: *Dobrushin's program on Gibbsianity restoration: Weakly Gibbsian and Almost Gibbsian random fields*, In: "On Dobrushin's way. From Probability Theory to Statistical Mechanics", ed. by R.A. Minlos, S. B. Shlosman, Yu.M. Suhov, pp. 59–70, Amer. Math. Soc. Transl. Ser. 2, **198**, Amer. Math. Soc., Providence, RI, 2000.
- [62] A.C.D. van Enter, Ch. Maes, R. H. Schonmann and S. Shlosman: *The Griffiths Singularity Random Field*, In: "On Dobrushin's way. From Probability Theory to Statistical Mechanics", ed. by R.A. Minlos, S. B. Shlosman, Yu.M. Suhov, pp. 51–58, Amer. Math. Soc. Transl. Ser. 2, **198**, Amer. Math. Soc., Providence, RI, 2000.
- [63] Ch. Maes and S. Shlosman: *Freezing Transition in the Ising Model without Internal Contours*, Probab. Theory Relat. Fields **115**, 479-503, 1999.
- [64] S. Shlosman: *Metastable states: smooth continuation through the critical point*. In: Statistical Physics. Invited Papers from STATPHYS 20. Physica A, **263**, 180-186, 1999.
- [65] Ch. Maes, F. Redig, S. Shlosman and A. van Moffaert: *Percolation, Path Large Deviations and Weakly Gibbs States*, Comm Math Phys., **209**, 517-545, 2000.
- [66] L. Chayes, S. Shlosman and V. Zagrebnov: *Discontinuity of the Magnetization in Diluted  $O(n)$ -Models*, J. Statist. Phys. **98**, 537–549, 2000.
- [67] S. Shlosman: *Geometric variational problems of statistical mechanics and of combinatorics*, Probabilistic techniques in equilibrium and non-equilibrium statistical physics. J. Math. Phys. **41**, 1364–1370, 2000.
- [68] S. Shlosman: *Path Large Deviation and Other Typical Properties of the Low-Temperature Models, with Applications to the Weakly Gibbs States*, Markov Processes and Related Fields, **6**, 121- 134, 2000.
- [69] S. Shlosman: *Metastable states as continuations of Gibbs states*. In: Proceedings of XIIIth ICMP, London, 2000, International Press of Boston, 143-150.

- [70] S. Shlosman and M. Tsfasman: *Random Lattices and Random Sphere Packings: Typical Properties*, arXiv.org e-Print archive, math-ph/0011040, Moscow Math. Journal, **1**, 73-89, 2001.
- [71] S. Shlosman: *The Wulff construction in statistical mechanics and in combinatorics*, arXiv.org e-Print archive, math-ph/0010039, Russ. Math. Surv., 2001, **56** (4), 709-738.
- [72] S. Shlosman: *The life of amoebas (of the Ising model)*, Markov Proc. Relat. Fields, **7**, 113-115, 2001.
- [73] P. Bleher, J. Ruiz, R.H. Schonmann, S. Shlosman and V. Zagrebnov: *Rigidity of the critical phases on a Cayley tree*, [http://rene.ma.utexas.edu/mp\\_arc/](http://rene.ma.utexas.edu/mp_arc/), # 00-418, Moscow Math. Journal, **1**, no. 3, 345-364, 2001.
- [74] S. Shlosman: *Applications of the Wulff construction to the number theory*, arXiv.org e-Print archive, math-ph/0109027, "Representation Theory, Dynamical Systems, Combinatorial and Algorithmic Methods. Part 7" (A.M.Vershik ed.). Zapiski Nauchnyh Seminarov POMI, vol. 292, 2002, Pages 153-160, <http://www.pdmi.ras.ru/zns1/2002/v292.html>.
- [75] D. Ioffe, S. Shlosman, and Y. Velenik: *2D models of statistical physics with continuous symmetry: the case of singular interactions*, Comm. Math. Phys., **226**, 433-454, 2002.
- [76] A.C.D. van Enter, S.B.Shlosman: *First-order transitions for n-vector models in two and more dimensions; rigorous proof*, [http://www.ma.utexas.edu/mp\\_arc/e/02-236.latex.mime](http://www.ma.utexas.edu/mp_arc/e/02-236.latex.mime), Phys. Rev. Lett. 89, # 28, 285702, 2002.
- [77] Blanchard Ph., Gandolfo D., Ruiz J., Shlosman S. *On the Euler-Poincare Characteristic of the Random Cluster Model*, Markov Processes and Related Fields, v. 9, # 4, pp. 523-545, 2003
- [78] S.B. Shlosman, V.A. Zagrebnov: *Magnetostriction Transition*, <http://arXiv.org/abs/math-ph/0305026>, Journal of Statistical Physics, 2004, vol. 114, no. 3/4, pp. 563-574.



- [79] A.C.D. van Enter, S.B.Shlosman: *Provable first-order transitions for liquid crystal and lattice gauge models with continuous symmetries*, <http://fr.arxiv.org/pdf/cond-mat/0306362>, Communications in Math. Physics, v. 255, n. 1, pp. 21 - 32, 2005.
- [80] A.N. Rybko, S.B. Shlosman: *Poisson Hypothesis for Information Networks*. [http://fr.arxiv.org/PS\\_cache/math/pdf/0406/0406110.pdf](http://fr.arxiv.org/PS_cache/math/pdf/0406/0406110.pdf). Sinai's Festschrift, Moscow Math. J., v.5, 679-704, 2005, Tsfasman's Festschrift, Moscow Math. J., v.5, 927-959, 2005.
- [81] A.N. Rybko, S.B. Shlosman: *Poisson Hypothesis: combinatorial aspect*. Problemy Peredachi Informatsii 2005, V41, N3, pp. 51-57. Problems of Information Transmission, Volume 41, Number 3 Pages: 230 - 236, 2005
- [82] Thierry Bodineau, Roberto H. Schonmann, Senya Shlosman. *3D crystal: how flat its flat facets are?* <http://fr.arxiv.org/pdf/math-ph/0401010>, Communications in Math. Physics. v. 255, n. 3, pp. 747 - 766, 2005.
- [83] Rybko, A. N.; Shlosman, S.B. and Vladimirov A. *Self-averaging property of queuing systems*, <http://fr.arxiv.org/abs/math.PR/0510046>, Problems of Information Transmission, 42 , Issue 4 (December 2006) Pages: 344 - 355.
- [84] Senya Shlosman. Large Deviations in Equilibrium Statistical Mechanics, in: Encyclopedia of Mathematical Physics, eds. J.-P. Francoise, G.L. Naber and Tsou S.T. Oxford: Elsevier, 2006 (ISBN 978-0-1251-2666-3), volume 3, page 261-263.
- [85] Senya Shlosman. Metastable States, in: Encyclopedia of Mathematical Physics, eds. J.-P. Francoise, G.L. Naber and Tsou S.T. Oxford: Elsevier, 2006 (ISBN 978-0-1251-2666-3), volume 3, page 417-420.
- [86] Senya Shlosman. Wulff Droplets, in: Encyclopedia of Mathematical Physics, eds. J.-P. Francoise, G.L. Naber and Tsou S.T. Oxford: Elsevier, 2006 (ISBN 978-0-1251-2666-3), volume 5, page 462-464.
- [87] A.C.D. van Enter, S.B.Shlosman: *First-order transitions for very non-linear sigma models*. <http://fr.arxiv.org/abs/cond-mat/0506730>. John

Lewis memorial volume: Markov Processes Relat. Fields 13, 239–249 (2007)

- [88] Senya Shlosman and Yvon Vignaud: Dobrushin Interfaces via Reflection Positivity, [http://arxiv.org/PS\\_cache/math-ph/pdf/0610/0610060.pdf](http://arxiv.org/PS_cache/math-ph/pdf/0610/0610060.pdf), CMP Volume 276, Number 3, pp. 827–861, 2007.
- [89] Rybko, A. N.; Shlosman, S.B.: *Phase transitions in the queuing networks and the violation of the Poisson hypothesis*. Mosc. Math. J. 8 (2008), no. 1, 159–180.
- [90] Ioffe, D. and Shlosman, S.: *Ising model fog drip: the first two droplets*, In: “In and Out of Equilibrium 2”, Progress in Probability 60, 365–382, eds. M.E. Vares, V. Sidoravicius, Birkhauser, 2008.
- [91] Rybko, A. N.; Shlosman, S.B. and Vladimirov A.: *Spontaneous Resonances and the Coherent States of the Queuing Networks*, J. Stat Phys (2008) 134: 67–104.
- [92] A. Rybko, S. Shlosman and A. Vladimirov: *Absence of Breakdown of the Poisson Hypothesis. I. Closed Networks at Low Load*, <http://arxiv.org/abs/0811.3577>, Markov Processes and Related Field, 16, pp.267-285, 2010.
- [93] Alexei Borodin & Senya Shlosman: Gibbs Ensembles of Nonintersecting Paths, Commun. Math. Phys. 293, 145–170 (2010).
- [94] Jean Bellissard, Charles Radin and Senya Shlosman. The characterization of ground states, Journal of Physics A: Mathematical and Theoretical, Volume 43, Issue 30, pp. 305001 (2010).
- [95] Dima Ioffe; Senya Shlosman. Ising fog drip: the shallow puddle,  $o(N)$  deep. Actes des rencontres du CIRM, 2 no. 1: Déviations pour les temps locaux d’auto-intersections (2010), p. 31-36.
- [96] Ch. Maes, Senya Shlosman: Rotating States in Driven Clock- and XY-Models; Journal of Statistical Physics: Volume 144, Issue 6 (2011), Page 1238-1246.

- [97] Daniel Gandolfo, Jean Ruiz and Senya Shlosman: A Manifold of Pure Gibbs States of the Ising Model on a Cayley tree. arXiv:1207.0983v1 [math-ph], 2012, J Stat Phys (2012) 148:999–1005
- [98] S. Shlosman: Constructive criteria. Eur. Phys. J. H 37, 595–603 (2012)
- [99] The European Physical Journal H, Volume 37, Number 4 (2012), 619–637, From the seminar on Mathematical Statistical Physics in Moscow State University, 1962–1994. Contour technics E. Dinaburg, E. A. Pechersky, S. A. Pirogov, S. Shlosman and Yu. M. Suhov
- [100] The European Physical Journal H, Volume 37, Number 4 (2012), 571–594, From the seminar on Mathematical Statistical Physics in Moscow State University, 1962–1994. Gibbs random fields on the lattice. Definitions, existence, uniqueness. R. A. Minlos, E. A. Pechersky, S. A. Pirogov, S. Shlosman and Yu. M. Suhov
- [101] S. B. Shlosman: Can reliable memory be composed of error-prone elements? Automation and Remote Control, Volume 74, Issue 10, pp 1614-1619, 2013
- [102] D. Ioffe, S. Shlosman, F. Toninelli: Interaction versus entropic repulsion for low temperature Ising polymers, arXiv:1407.3592 [math.PR]. J. Stat. Physics, 2015, Volume 158, Issue 5, pp 1007-1050
- [103] Daniel Gandolfo, Jean Ruiz, and Senya Shlosman: A manifold of pure Gibbs states of the Ising model on the Lobachevsky plane. <http://arxiv.org/abs/1310.5898>, Commun. Math. Phys. 2015, Volume 334, Issue 1, pp 313-330
- [104] Dmitry Ioffe, Senya Shlosman, Yvan Velenik. An invariance principle to Ferrari-Spohn diffusions. <http://arxiv.org/abs/1403.5073>, Commun. Math. Phys. 2015, Volume 336, Issue 2, pp 905-932.
- [105] François Baccelli, Alexandre Rybko, and Senya Shlosman: Queueing networks with mobile servers: The mean-field approach. <http://arxiv.org/abs/1311.3898>, Problems of Information Transmission, 2016, no. 52, 178, doi:10.1134/S0032946016020071

- [106] Rybko, A. N. and Shlosman, S.B.: Stationary States of the Generalized Jackson Networks, <http://arxiv.org/abs/1308.1524>, Markov Processes Relat. Fields 22, 759-774, (2016)
- [107] Rybko, A. N.; Shlosman, S.B. and Vladimirov A.: Poisson Hypothesis for Open Networks at Low Load, Markov Processes and Related Fields, v. 4, 2016.
- [108] O. Ogievetsky, S. Shlosman: Plane partitions and their pedestal polynomials, arXiv:1412.7666, submitted to Discrete Mathematics.
- [109] François Baccelli, Alexandre Rybko, Senya Shlosman and Alexandre Vladimirov: “Stability, metastability and instability of moving networks I, II”, in preparation.
- [110] François Baccelli, Alexandre Rybko, Senya Shlosman and Alexandre Vladimirov: Metastability of Queuing Networks with Mobile Servers, arXiv:1704.02521
- [111] Pirogov, S.A., Rybko, A. N. and Shlosman, S.B.: Propagation of Chaos for some Queuing Networks, arXiv:1610.08492, accepted by MMJ.
- [112] Ioffe, D. and Shlosman, S.: Formation of Facets for an Effective Model of Crystal Growth; arXiv:1704.06760
- [113] Rob Kusner, Wöden Kusner, Jeffrey C. Lagarias, Senya Shlosman: THE TWELVE SPHERES PROBLEM, arXiv:1611.10297 [math.GT]
- [114] Daniel Gandolfo, Christian Maes, Jean Ruiz, Senya Shlosman: Spin glass phenomenon as roughening transition. In preparation.
- [115] S. Shlosman: Crystals in the Void; arXiv:1706.08967 [math-ph]
- [116] O. Ogievetsky, S. Shlosman: The six cylinders problem:  $\mathbb{D}_3$  approach. In preparation.
- [117] O. Ogievetsky, S. Shlosman: The four cylinders problem. In preparation.