Yuri Prokhorov
List of Publications

Books and lecture notes

[1] V. A. Iskovskikh and Yu. Prokhorov. *Fano varieties. Algebraic geometry. V.*, volume 47 of *Encyclopaedia Math. Sci.* Springer, Berlin, 1999.

[2] Yu. Prokhorov. *Lectures on complements on log surfaces*, volume 10 of *MSJ Memoirs.* Mathematical Society of Japan, Tokyo, 2001.

[3] Yu. Prokhorov. *Elliptic curves and cryptography. Part 1.* Moscow Univ. Publ., 2007. Russian.

[4] Yu. Prokhorov. *Singularities in algebraic geometry.* MCCME, Moscow, 2009. Russian.

Research papers

[5] I. Ya. Kolpakov-Miroshnichenko and Yu. Prokhorov. Rationality of the field of invariants of the faithful four-dimensional representation of the icosahedral group. *Mat. Zametki*, 41(4):479–483, 619, 1987.

[6] Yu. Prokhorov. Exotic Fano varieties. *Moscow Univ. Math. Bull.*, 45(3):36–38, 1990.

[7] Yu. Prokhorov. Automorphism groups of Fano 3-folds. *Russian Math. Surveys*, 45(3):222–223, 1990.

[8] I. Ya. Kolpakov-Miroshnichenko and Yu. Prokhorov. Rationality construction of fields of invariants of some finite four-dimensional linear groups associated with Fano threefolds. *Math. Notes*, 51:74–76, 1992.

[9] Yu. Prokhorov. Fano threefolds of genus 12 and compactifications of $\mathbf{C}^3$. *St. Petersburg Math. J.*, 3(4):855–864, 1992.

[10] Yu. Prokhorov. Invariant subvarieties in spaces of binary forms. *Russian Math. Surveys*, 47(4):224–225, 1992.

[11] I. Ya. Kolpakov-Miroshnichenko and Yu. Prokhorov. Rationality of fields of invariants of some four-dimensional linear groups, and an equivariant construction related to the Segre cubic. *Math. USSR Sbornik*, 74(1):169–183, 1993.

[12] Yu. Prokhorov. Invariant subvarieties in spaces of binary forms. *St. Petersburg Math. J.*, 4(5):981–988, 1993.

[13] Yu. Prokhorov. Rationality constructions of some Fano fourfolds of index 2. *Moscow Univ. Math. Bull.*, 48(2):32–35, 1993.

[14] Yu. Prokhorov. Compactifications of $\mathbf{C}^4$ of index 3. In *Algebraic geometry and its applications (Yaroslavl′, 1992)*, Aspects Math., E25, pages 159–169. Vieweg, Braunschweig, 1994.

[15] Yu. Prokhorov. On the existence of good divisors on Fano varieties of coindex 3. *Proc. Steklov Inst. Math.*, 208:234–243, 1995.

[16] Yu. Prokhorov. The existence of smooth divisors on Fano fourfolds of index 2. *Russian Acad. Sci. Sb. Math.*, 83(1):119–131, 1995.

[17] Yu. Prokhorov. On general elephant on $\mathbf{Q}$-Fano fiber space with two-dimensional base. *Fund. i Prikl. Mat.*, 1(1):263–280, 1995. Russian.

[18] Yu. Prokhorov. On algebraic threefolds whose hyperplane sections are Enriques surfaces. *Russian Acad. Sci. Sb. Math.*, 186(9):1341–1352, 1995.

[19] Yu. Prokhorov. On extremal contractions from threefolds to surfaces: the case of one non-Gorenstein point. In *Birational algebraic geometry (Baltimore, MD, 1996)*, volume 207 of *Contemp. Math.*, pages 119–141. Amer. Math. Soc., Providence, RI, 1997.

[20] Yu. Prokhorov. On the existence of complements of the canonical divisor for Mori conic bundles. *Russian Acad. Sci. Sb. Math.*, 188(11):1665–1685, 1997.

[21] Yu. Prokhorov. On the existence of good divisors on Fano manifolds of coindex 3. II. *J. Math. Sci. (New York)*, 85(4):2115–2127, 1997. Algebraic geometry, 2.

[22] D. Markushevich and Yu. Prokhorov. Exceptional quotient singularities. *Amer. J. Math.*, 121(6):1179–1189, 1999.

[23] D. Markushevich and Yu. Prokhorov. Klein's group defines an exceptional singularity of dimension 3. *J. Math. Sci. (New York)*, 94(1):1060–1067, 1999. Algebraic geometry, 9.

[24] Yu. Prokhorov. Mori conic bundles with a reduced log-terminal boundary. *J. Math. Sci. (New York)*, 94(1):1051–1059, 1999. Algebraic geometry, 9.

[25] Yu. Prokhorov. On extremal contractions from threefolds to surfaces: the case of one non-Gorenstein point and a nonsingular base surface. *J. Math. Sci. (New York)*, 95(1):1986–1995, 1999. Algebraic geometry, 8.

[26] Yu. Prokhorov. Blow-ups of canonical singularities. In *Algebra (Moscow, 1998)*, pages 301–317. de Gruyter, Berlin, 2000.

[27] Yu. Prokhorov. Boundedness of nonbirational extremal contractions. *Internat. J. Math.*, 11(3):393–411, 2000.

[28] Yu. Prokhorov. Boundedness of exceptional quotient singularities. *Math. Notes*, 68(5):664–667, 2000.

[29] Yu. Prokhorov. On log canonical thresholds in dimension three. In *Universal algebra and applications. Proc. Internat. Semin. dedicated to the memory of L. A. Skornyakov September 6–11, 1999*, pages 250–256, Volgograd, 2000. Volgograd, Peremena. Russian.

[30] Shihoko Ishii and Yuri Prokhorov. Hypersurface exceptional singularities. *Internat. J. Math.*, 12(6):661–687, 2001.

[31] Yu. Prokhorov. On classification of Mori contractions: Elliptic curve case. *Izvestiya Math. Russian Acad. Sci.*, 65(1):75–84, 2001.

[32] Yu. Prokhorov. Complements on conic fibrations. I. *J. Math. Sci. (New York)*, 106(5):3353–3364, 2001. Algebraic geometry, 11.

[33] Yu. Prokhorov. On the classification of Mori conic bundles. *J. Math. Sci. (New York)*, 106(5):3340–3352, 2001. Algebraic geometry, 11.

[34] Yu. Prokhorov. On log canonical thresholds. *Comm. Algebra*, 29(9):3961–3970, 2001. Special issue dedicated to Alexei Ivanovich Kostrikin.

[35] Yu. Prokhorov. On a conjecture of Shokurov: characterization of toric varieties. *Tohoku Math. J. (2)*, 53(4):581–592, 2001.

[36] Yu. Prokhorov and V. V. Shokurov. The first main theorem on complements: from global to local. *Izvestiya Math. Russian Acad. Sci.*, 65(6):1169–1196, 2001.

[37] Yu. Prokhorov. A remark on the resolution of three-dimensional terminal singularities. *Russian Math. Surveys*, 57(4):815–816, 2002.

[38] Yu. Prokhorov. On log canonical thresholds. II. *Comm. Algebra*, 30(12):5809–5823, 2002.

[39] Yu. Prokhorov. Elliptic Gorenstein singularities, log canonical thresholds, and log Enriques surfaces. *J. Math. Sci. (N. Y.)*, 115(3):2378–2394, 2003. Algebraic geometry, 12.

[40] Yu. Prokhorov. **E1**-blowing ups of terminal singularities. *J. Math. Sci. (N. Y.)*, 115(3):2395–2427, 2003. Algebraic geometry, 12.

[41] Yu. Prokhorov. On Zariski decomposition problem. *Proc. Steklov Inst. Math.*, 240:37–65, 2003.

[42] Yu. Prokhorov. An application of the canonical bundle formula. *Proc. Steklov Inst. Math.*, 241:195–201, 2003.

[43] Yu. Prokhorov. On semistable Mori contractions. *Izv. Ross. Akad. Nauk Ser. Mat.*, 68(2):147–158, 2004.

[44] Yu. Prokhorov. A remark on Fano threefolds with canonical Gorenstein singularities. In *The Fano Conference*, pages 647–657. Univ. Torino, Turin, 2004.

[45] James McKernan and Yuri Prokhorov. Threefold thresholds. *Manuscripta Math.*, 114(3):281–304, 2004.

[46] Yu. Prokhorov. On the degree of Fano threefolds with canonical Gorenstein singularities. *Russian Acad. Sci. Sb. Math.*, 196(1):81–122, 2005.

[47] Yu. Prokhorov. On semistable Mori conic bundles. *J. Math. Sci. (New York)*, 131(6):6140–6147, 2005.

[48] Yu. Prokhorov and A. Verëvkin. The Riemann-Roch theorem on surfaces with log-terminal singularities,. *J. Math. Sci. (New York)*, 140(2):200–205, 2007.

[49] Yu. Prokhorov. On Fano-Enriques threefolds. *Russian Acad. Sci. Sb. Math.*, 198(4):559–574, 2007.

[50] Yu. Prokhorov. The degree of **Q**-Fano threefolds. *Russian Acad. Sci. Sb. Math.*, 198(11):1683–1702, 2007.

[51] Shigefumi Mori and Yuri Prokhorov. On **Q**-conic bundles. *Publ. Res. Inst. Math. Sci.*, 44(2):315–369, 2008.

[52] Shigefumi Mori and Yuri Prokhorov. On **Q**-conic bundles. II. *Publ. Res. Inst. Math. Sci.*, 44(3):955–971, 2008.

[53] Yu. Prokhorov. Gap conjecture for 3-dimensional canonical thresholds. *J. Math. Sci. Univ. Tokyo*, 15(4):449–459, 2008.

[54] Huah Chu, Shou-Jen Hu, Ming-chang Kang, and Yu. Prokhorov. Noether's problem for groups of order 32. *J. Algebra*, 320(7):3022–3035, 2008.

[55] S. Mori and Yu. Prokhorov. On **Q**-conic bundles, III. *Publ. Res. Inst. Math. Sci.*, 45(3):787–810, 2009.

[56] S. Mori and Yu. Prokhorov. Multiple fibers of del Pezzo fibrations. *Proc. Steklov Inst. Math.*, 264(1):131–145, 2009.

[57] Yu. Prokhorov. **Q**-Fano threefolds of large degree. In *Current Probl. Math. Mech.*, volume 4 of *Math.*, pages 105–115. Moscow State Lomonosov Univ., Fac. Math., 2009. in Russian.

[58] Yu. Prokhorov and V. V. Shokurov. Towards the second main theorem on complements. *J. Algebraic Geom.*, 18(1):151–199, 2009.

[59] Paul Hacking and Yuri Prokhorov. Smoothable del Pezzo surfaces with quotient singularities. *Compositio Math.*, 146(1):169–192, 2010.

[60] Yuri G. Prokhorov. Fields of invariants of finite linear groups. In *Cohomological and geometric approaches to rationality problems*, volume 282 of *Progr. Math.*, pages 245–273. Birkhäuser Boston Inc., Boston, MA, 2010.

4

[61] Yu. Prokhorov. **Q**-Fano threefolds of large Fano index, I. *Documenta Math.*, 15:843–872, 2010.

[62] Ming-chang Kang and Yu. Prokhorov. Rationality of three-dimensional quotients by monomial actions. *J. Algebra*, 324(9):2166–2197, 2010.

ACCEPTED PAPERS

[63] T. Kishimoto, Yu. Prokhorov, and M. Zaidenberg. Group actions on affine cones. *ArXiv e-prints*. arXiv: 0905.4647, to appear in Peter Russell's Festschrift, Proceedings of the conference on Affine Algebraic Geometry held in Professor Russell's honour, 1–5 June 2009, McGill Univ., Montreal.

[64] S. Mori and Yu. Prokhorov. Threefold extremal contractions of type IA. *ArXiv e-prints*. arXiv: 1004.4188, to appear in Kyoto J. Math.

SUBMITTED PAPERS

[65] Yu. Prokhorov. Simple finite subgroups of the Cremona group of rank 3. *ArXiv e-prints*, 2009.

[66] Yu. Prokhorov. p-elementary subgroups of the Cremona group of rank 3. *ArXiv e-prints*, 2009. submitted to Proc. Conf. "Classification of Algebraic Varieties", Schiermonnikoog, 2009, European Math. Soc.

[67] Yu. Prokhorov. Del Pezzo fibrations. *ArXiv e-prints*, 2009.

[68] Yu. Prokhorov. Q-Fano threefolds of large Fano index, II. *ArXiv e-prints*, 2010.

[69] Yu. Prokhorov. G-Fano threefolds, I. *ArXiv e-prints*, 2010.