

Algebraic Geometry

Surfaces and Higher Dimensional Varieties

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- [1] Selma Altınok, Gavin Brown, and Miles Reid. Fano 3-folds, $K3$ surfaces and graded rings. In *Topology and Geometry: Commemorating SISTAG*, volume 314 of *Contemp. Math.*, pages 25–53. Amer. Math. Soc., Providence, RI, 2002.
- [2] Arthur Baragar and Ronald van Luijk. $K3$ surfaces with Picard number three and canonical vector heights. *Math. Comp.*, 76(259):1493–1498 (electronic), 2007.
- [3] I. C. Bauer, F. Catanese, and F. Grunewald. The classification of surfaces with $p_g = q = 0$ isogenous to a product of curves. *Pure Appl. Math. Q.*, 4(2, part 1):547–586, 2008.
- [4] Ingrid Bauer, Fabrizio Catanese, and Fritz Grunewald. Beauville surfaces without real structures. In *Geometric Methods in Algebra and Number Theory*, volume 235 of *Progr. Math.*, pages 1–42. Birkhäuser Boston, Boston, MA, 2005.
- [5] Ingrid Bauer, Fabrizio Catanese, and Fritz Grunewald. The absolute Galois group acts faithfully on the connected components of the moduli space of surfaces of general type. [arXiv:0706.1466v1 \[math.AG\]](#), 13 pages, 2007.
- [6] Ingrid Bauer, Fabrizio Catanese, Fritz Grunewald, and Roberto Pignatelli. Quotients of a product of curves by a finite group and their fundamental groups. [arXiv:0809.3420](#), 37 pages, 2008.
- [7] Ingrid C. Bauer and Fabrizio Catanese. A volume maximizing canonical surface in 3-space. *Comment. Math. Helv.*, 83(2):387–406, 2008.
- [8] Ingrid C. Bauer, Fabrizio Catanese, and Roberto Pignatelli. Complex surfaces of general type: Some recent progress. In *Global Aspects of Complex Geometry*, pages 1–58. Springer, Berlin, 2006.

- [9] Ingrid C. Bauer, Fabrizio Catanese, and Roberto Pignatelli. The moduli space of surfaces with $K^2 = 6$ and $p_g = 4$. *Math. Ann.*, 336(2):421–438, 2006.
- [10] Tobias Beck. Formal desingularization of surfaces: The Jung method revisited. *J. Symb. Comput.*, 44(2):131–160, 2009.
- [11] Tobias Beck and Josef Schicho. Adjoint computation for hypersurfaces using formal desingularizations. *Journal of Algebra*, 320(11):3984 – 3996, 2008.
- [12] Martin Bright. Brauer groups of diagonal quartic surfaces. *J. Symbolic Comput.*, 41(5):544–558, 2006.
- [13] S. Allen Broughton. Enumeration of the equisymmetric strata of the moduli space of surfaces of low genus. *Preprint*, 25 pages.
- [14] G. Brown and K. Suzuki. Fano 3-folds with divisible anticanonical class. *Manuscripta Math.*, 123:37–51, 2007.
- [15] Gavin Brown. Datagraphs in algebraic geometry and $K3$ surfaces. In *Symbolic and Numerical Scientific Computation (Hagenberg, 2001)*, volume 2630 of *Lecture Notes in Comput. Sci.*, pages 210–224. Springer, Berlin, 2003.
- [16] Gavin Brown. Graded rings and special $K3$ surfaces. In *Discovering Mathematics with Magma*, volume 19 of *Algorithms Comput. Math.*, pages 137–159. Springer, Berlin, 2006.
- [17] Gavin Brown. A database of polarized $K3$ surfaces. *Experiment. Math.*, 16(1):7–20, 2007.
- [18] Gavin Brown and Kaori Suzuki. Computing certain Fano 3-folds. *Japan J. Indust. Appl. Math.*, 24(3):241–250, 2007.
- [19] Gavin Brown and Kaori Suzuki. Fano 3-folds with divisible anticanonical class. *Manuscripta Math.*, 123(1):37–51, 2007.
- [20] Nils Bruin. Visualising $Sha[2]$ in abelian surfaces. *Math. Comp.*, 73(247):1459–1476 (electronic), 2004.

- [21] Anita Buckley and Balázs Szendrői. Orbifold Riemann-Roch for threefolds with an application to Calabi-Yau geometry. *J. Algebraic Geom.*, 14(4):601–622, 2005.
- [22] Jorge Caravantes. Low codimension Fano–Enriques threefolds. [arXiv:math.AG/0504072](https://arxiv.org/abs/math/0504072), 27 pages, 2006.
- [23] A. Clingher, C.F. Doran, J. Lewis, and U. Whitcher. Normal forms, K3 surface moduli, and modular parametrizations. In *Groups and Symmetries: Proceedings of the CRM conference in honor of John McKay.*, volume 47 of *CRM-AMS Proceedings and Lecture Notes*, 18 pages, 2008.
- [24] Patrick Corn. Tate-Shafarevich groups and K3 surfaces. *Math. Comp.*, To appear, 17 pages, 2007.
- [25] Alessio Corti and Miles Reid. Weighted Grassmannians. In *Algebraic Geometry*, pages 141–163. de Gruyter, Berlin, 2002.
- [26] Willem A. de Graaf, Michael Harrison, Jana Pílníková, and Josef Schicho. A Lie algebra method for rational parametrization of Severi-Brauer surfaces. *J. Algebra*, 303(2):514–529, 2006.
- [27] Willem A. de Graaf, Jana Pílníková, and Josef Schicho. Parametrizing del Pezzo surfaces of degree 8 using Lie algebras. *J. Symbolic Comput.*, 44(1):1 – 14, 2009.
- [28] Ulrich Derenthal. On the Cox ring of del Pezzo surfaces. [arXiv:math.AG/0603111](https://arxiv.org/abs/math/0603111), 17 pages, 2006.
- [29] Ulrich Derenthal. Universal torsors of del Pezzo surfaces and homogeneous spaces. *Adv. Math.*, 213(2):849–864, 2007.
- [30] Luis V. Dieulefait. Computing the level of a modular rigid Calabi-Yau threefold. *Exp. Math.*, 13(2):165–169, 2004.
- [31] Noam D. Elkies. Three lectures on elliptic surfaces and curves of high rank. [arXiv:0709.2908v1](https://arxiv.org/abs/0709.2908v1), 14 pages, 2007.
- [32] Pavel Etingof, Alexei Oblomkov, and Eric Rains. Generalized double affine Hecke algebras of rank 1 and quantized del Pezzo surfaces. *Adv. Math.*, 212(2):749–796, 2007.

- [33] Victor Ginzburg. Calabi-Yau algebras. [arXiv:math.AG/0612139v3](#), 79 pages, 2007.
- [34] V. A. Gritsenko, K. Hulek, and G. K. Sankaran. The Kodaira dimension of the moduli of $K3$ surfaces. *Invent. Math.*, 169(3):519–567, 2007.
- [35] Johan P. Hansen. Toric surfaces and codes, techniques and examples. *Preprint Series No.1., University of Aarhus, Department of Mathematics, Aarhus, Denmark*, 12 pages, 2004.
- [36] Kiran S. Kedlaya. Computing zeta functions of surfaces. *Mathematisches Forschungsinstitut Oberwolfach Report*, 32:1808–1810, 2005.
- [37] Adam Logan. The Brauer-Manin obstruction on del Pezzo surfaces of degree 2 branched along a plane section of a Kummer surface. *Math. Proc. Cambridge Philos. Soc.*, 144(3):603–622, 2008.
- [38] Francesco Polizzi. Standard isotrivial fibrations with $p_g = q = 1$. *Journal of Algebra*, 321(6):1600 – 1631, 2009.
- [39] Gopal Prasad and Sai-Kee Yeung. Fake projective planes. *Invent. Math.*, 168(2):321–370, 2007.
- [40] Carlos Rito. On surfaces with $p_g = q = 1$ and non-ruled bicanonical involution. *Ann. Sc. Norm. Super. Pisa Cl. Sci. (5)*, 6(1):81–102, 2007.
- [41] Carlos Rito. Involutions on surfaces with $p_g = q = 1$. [arXiv:0805.4513v1 \[math.AG\]](#), 34 pages, 2008.
- [42] Carlos Rito. On equations of double planes with $p_g = q = 1$. [arXiv:0804.2227v1 \[math.AG\]](#), 18 pages, 2008.
- [43] Stefan Schröer. Kummer surfaces for the self-product of the cuspidal rational curve. *J. Algebraic Geom.*, 16(2):305–346, 2007.
- [44] James P Smith. *Picard-Fuchs Differential Equations for Families of $K3$ Surfaces*. Ph D thesis, University of Warwick, 2007.
- [45] Kaori Suzuki. On Fano indices of Q -Fano 3-folds. *Manuscripta Math.*, 114(2):229–246, 2004.

- [46] Ronald van Luijk. $K3$ surfaces with Picard number one and infinitely many rational points. [arXiv:math.AG/0506416 v2](#), 10 pages, 2005.
- [47] Ronald van Luijk. Quartic $K3$ surfaces without nontrivial automorphisms. *Math. Res. Lett.*, 13(2-3):423–439, 2006.
- [48] Ronald van Luijk. An elliptic $K3$ surface associated to Heron triangles. *J. Number Theory*, 123(1):92–119, 2007.
- [49] Anthony Várilly-Alvarado. Weak approximation on del Pezzo surfaces of degree 1. *Adv. Math.*, 219(6):2123–2145, 2008.
- [50] Bogdan G. Viooreanu. Mordell-Weil problem for cubic surfaces, numerical evidence. [arXiv:0802.0742v1 \[math.AG\]](#), 22 pages, 2008.