

# List of Publications

Fabrizio M.E. Catanese

April 11, 2021

- [1 ] *Un teorema di dualita' per i fasci coerenti su uno spazio analitico reale.* Ann. Sc. Normale Pisa, XXVII, IV, (1973),845-871.
- [2 ] *Decomposizioni primarie locali e decomposizioni irriducibili globali per conici e fibrati lineari analitici.* B.U.M.I. (4), 11, (1975), 213-223.
- [3 ] *Orientations of an analytic space.* B.U.M.I. (2) 13-B (1976), 531-555.
- [4 ] *Coomologia dei fasci coerenti e teoremi di Lefschetz sulle variet  proiettive.* (coll. with M. Beltrametti, notes of a course by B. Moisezon), Publ. Centro di Analisi Globale CNR (1976), Firenze, I-II + 1-64.
- [\*5 ] *The tricanonical map of a surface with  $K^2 = 2$ ,  $p_g = 0$ .* (coll. with E.Bombieri), in 'C.P. Ramanujam- A Tribute', Stud. in Math. n. 8, Tata Inst., (1978), Bombay, 279-290.
- [\*6 ] *Pluricanonical mappings of surfaces with  $K^2 = 1, 2$ ,  $q = p_g = 0$ .* in 'C.I.M.E. 1977: Algebraic surfaces', Liguori, Napoli (1981), 247-266. Reprinted in: Algebraic surfaces, 247-266, C.I.M.E. Summer Sch., 76, Springer, Heidelberg, 2010.
- [\*7 ] *On a class of surfaces of general type.* in 'C.I.M.E. 1977: Algebraic surfaces', Liguori, Napoli (1981), 267-284. Reprinted in: Algebraic surfaces, 267-284, C.I.M.E. Summer Sch., 76, Springer, Heidelberg, 2010.
- [8 ] *On Severi's proof of the double point formula.* Comm. in Alg. 7 (7), (1979), 763-773.
- [\*9 ] *Surfaces with  $K^2 = p_g = 1$  and their period mapping.* in 'Algebraic Geometry', Proc. Copenhagen 1978, Springer LNM 732 (1979), Berlin, 1-29.
- [\*10 ] *The moduli and the global period mapping of surfaces with  $K^2 = p_g = 1$ : a counterexample to the global Torelli problem.* Comp. Math. 41,3, (1980), 401-414.
- [\*11 ] *Babbage's conjecture, contact of surfaces, symmetric determinantal varieties and applications.* Inv. Math. 63 (1981),433-465.

- [\*12 ] *Constructing sextic surfaces with a given number  $d$  of nodes.* (coll. G. Ceresa), Jour. Pure Appl. Alg. 23 (1982), 1-12.
- [13 ] *Le applicazioni pluricanoniche di una curva riducibile giacente su una superficie.* Publ. Ist. Mat. 'L. Tonelli', (1979).
- [\*14 ] *Pluricanonical Gorenstein curves.* in 'Enumerative Geometry and Classical Algebraic Geometry', Proc. Nice 1981, Birkhäuser PM (1982), 50-96.
- [15 ] *Curve di genere basso.* in 'Seminario di variabili complesse, Università di Bologna 1981', Pitagora, Bologna (1982), 43-67.
- [16 ] *Infinitesimal Torelli theorems and counterexamples to Torelli problems.* Chap. VIII of 'Topics in Transcendental Algebraic Geometry', Annals of Math. Studies 106, Princeton Univ. Press (1983), 143-155.
- [\*17 ] *On the moduli spaces of surfaces of general type.* Jour. Diff. Geom. 19, 2 (1984), 483-515.
- [18 ] *On the period map of surfaces with  $K^2 = \chi = 2$ .* in 'Classification of algebraic varieties and compact complex manifolds', Proc. Katata 1982, Birkhäuser P.M. (1983), 27-43.
- [\*19 ] *On the rationality of certain moduli spaces related to curves of genus 4.* in 'Algebraic Geometry', Proc. Ann Arbor 1981, Springer LNM 1008 (1983), 30-50.
- [\*20 ] *Moduli of surfaces of general type.* in 'Algebraic Geometry- Open Problems', Proc. Ravello 1982, Springer L.N.M. 997, (1983) 90-112.
- [21 ] *Moduli of surfaces of general type.* (Japanese) [CA] Ring theory and algebraic geometry, Proc. 28th Symp. Algebra, Chiba Univ. 1982, 287-301 (1982).
- [\*22 ] *Commutative algebra methods and equations of regular surfaces.* in 'Algebraic Geometry' Proc. Bucharest 1982, Springer LNM 1056, (1984) 68-111.
- [23 ] *Generic invertible sheaves of 2 - torsion and generic invertible theta characteristics on nodal plane curves.* in 'Algebraic Geometry Sitges 1983', Springer L.N.M. 1124, (1985), 58-70.
- [\*24 ] *Automorphisms of Rational Double Points and Moduli spaces of Surfaces of general type.* Comp Math 61: 81-102 (1987).
- [\*25 ] *On a problem of Chisini.* Duke Math. Jour.53,1, 33-42 (1986).
- [26 ] *Equations of Pluriregular Varieties of general type.* in 'Geometry today-Roma 1984', Progress in Mathematics 60, 47-67 Birkhäuser (1985).
- [27 ] *Superficie complesse compatte.* Atti Convegno Naz. GNSAGA del CNR (1984), 7-58, Valetto Torino (1986).

- [\*28 ] *Connected components of moduli spaces.* Jour. Diff. Geom. 24 : 395-399 (1986).
- [29 ] *Surfaces with  $K^2 = 6$ ,  $\chi = 4$ , and with torsion.* (coll.with A. Bartalesi), Rend.Sem. Mat.Torino, fasc.spec.1986, 91-110.
- [30 ] *Canonical rings and "special" surfaces of general type.* in 'Algebraic Geometry Bowdoin 1985', A.M.S.Proc.of Symp.in Pure Math. 46, 1 (1987), 175-194.
- [\*31 ] *Moduli of algebraic surfaces.* in "Theory of moduli", Proc .CIM.E. 1985 Springer Lecture Notes in Math., 1-83 (1988).
- [\*32 ] *Surfaces with  $K^2 = 2$ ,  $p_g = 1$ ,  $q = 0$ .* (coll. with O. Debarre ), Crelle's Jour.(1989), 1-55.
- [\*33 ] *Everywhere non reduced moduli spaces.* Inv.Math. 98, (1989), 293-310.
- [\*34 ] *Footnotes to a theorem of I.Reider.* in Proc of the Conf. "Hyperplane sections", L'Aquila 1988, Springer LNM 1437, 67 – 74 (1990).
- [\*35 ] *Periodic meromorphic functions.* coll. with F.Capocasa, Acta Math. 166, 27-68 (1991).
- [36 ] *Periodic meromorphic functions and Lefschetz type theorems on quasi-Abelian varieties.* in Proc. of the Hua-Lo Keng Symposium, Beijing 1988, Science Press and Springer Verlag (1991), 40-68.
- [\*37 ] *Surfaces with  $p_g = q = 1$ .* coll. with C.Ciliberto, in Proc. of the Meeting "Problems on surfaces and their classification", Symposia Mathematica 32, INdAM, Academic Press, 49-79 (1991), Catanese, Ciliberto, Cornalba editors.
- [38 ] *The fundamental group of generic polynomials.* coll. with B.Wajnryb, Topology 30, 4, 641-651 (1991).
- [\*39 ] *Braids, trees and lemniscates.* coll. with M.Paluzny, Topology, 30, 4, 623-640 (1991).
- [\*40 ] *Symmetric products of elliptic curves and surfaces with  $p_g = q = 1$ .* coll. with C.Ciliberto, Jour. Alg. Geom. 2 (1993), 389- 411.
- [\*41 ] *Moduli and classification of irregular Kaehler manifolds (and algebraic varieties) with Albanese general type fibrations.* Invent. math. 104, 263-289 (1991)
- [42 ] *Recent results on irregular surfaces and irregular Kaehler manifolds.* Proc. of the Conf. "Geometry and complex variables" Bologna 1990, M.Dekker, New York, 59-88 (1991).
- [\*43 ]  *$d$ -very ample line bundles and embeddings of Hilbert schemes of 0-cycles.* coll. with L.Goettsche, Manuscripta Mathematica 68, 337-341 (1990).

- [44 ] *Surfaces with  $K^2 = \chi = 2$  and special nets of quadrics.* coll. with P. Crag-nolini and P. Oliverio, Proc. of the Conference on "Birational and Projective classification of Algebraic Varieties", L'Aquila 1992, Contemp. Mathematics 162 (1994), AMS, 77-128.
- [\*45 ] *Chow varieties, Hilbert schemes, and moduli spaces of surfaces of general type.* Journal of Algebraic Geometry, 1,3,1-34 (1992).
- [\*46 ] *Stable vector bundles and degrees of Weierstrass schemes.* coll. with M.Schneider, Mathematische Annalen 293, 579-594 (1992).
- [\*47 ] *On the irregularity of cyclic coverings of algebraic surfaces.* coll. with C.Ciliberto, Proc. of the Conf. "Geometry of complex projective Varieties" Cetraro 1990, Mediterranean Press 9 (1993), 89-115.
- [\*48 ] *Vector bundles, linear systems and extensions of  $\pi_1$ .* coll. with F. Tovena, Proc. of the Bayreuth Conf. "Algebraic Geometry" 1990, Springer LNM 1502, 51-70 (1992).
- [49 ] *(Some) Old and new results on algebraic surfaces.* Proc. of the first Congress of the European Mathematical Society, Birkhäuser Progress in Mathematics 119, (1994), 445 - 490.
- [\*50 ] *Configurations of real and complex polynomials.* (coll. P. Frediani) in Proc. of the Orsay Conf. on Algebraic Geometry, Soc. Math. de France Asterisque 218 (1993), 61-93.
- [\*51 ] *Trento examples.* (coll. Kollar - van Geemen), in 'Classification of Irregular varieties, Minimal models and Abelian varieties', Proc. Trento 1990, Ballico, Catanese and Ciliberto editors, Springer LNM 1515,(1992) 134-139.
- [\*52 ] *Linear systems on quasi-Abelian varieties.* (coll. F. Capocasa), Math. An-nalen 301, (1995), 183-197.
- [\*53 ] *Divisors of small genus on algebraic surfaces and projective embeddings.* (coll. M. Franciosi), Proc. of the 1993 Hirzebruch 65 Conference on Alg. Geom., Israel Math. Conf. Proc. vol.9 (1996), Contemp. Math., AMS, 109 - 140.
- [\*54 ] *Compact complex manifolds bimeromorphic to tori.* Proc. of the Conf. "Abelian Varieties", Egloffstein 1993, De Gruyter (1995), 55-62.
- [\*55 ] *Polynomial bounds for Abelian Groups of automorphisms.* (coll. M. Schnei-der), Comp. Math. 97: 1-15 (1995).
- [56 ] *Generalized Kummer surfaces and differentiable structures on Noether -Horikawa surfaces, part I.* in 'Manifolds and Geometry, Pisa 1993', Symposia Mathemat-ica XXXVI, Cambridge University Press (1996), 132- 177.

- [\*57 ] *Generic lemniscates of algebraic functions.* coll. with I. Bauer, *Mathematische Annalen* 307 (1997), 417-444.
- [58 ] *Rational surfaces in  $\mathbb{P}^4$  containing a plane curve.* (coll. K.Hulek), *Ann. di Mat. Pura Appl.* IV, 172 (1997), 229-256.
- [\*59 ] *Embeddings of curves and surfaces.* (coll. M.Franciosi, K.Hulek, M.Reid ), *Nagoya Math. J.*154 (1999), 185-220.
- [\*60 ] *On the classification of irregular surfaces of general type with nonbirational bicanonical map.* (coll. C.Ciliberto, M. Mendes Lopes), *Trans. A.M.S.* 350, 1, (1998), 275-308.
- [61 ] *Fundamental groups with few relations.* Proc. of the Conference "Higher dimensional complex varieties", Trento '94, De Gruyter (1996), 163- 165.
- [\*62 ] *Even sets of nodes are bundle symmetric.* (coll. G. Casnati) *Jour. Diff. Geom.*47 (1997), 237- 256 (Erratum: *Jour. Diff. Geom.*50 (1998), 415)
- [63 ] *The orbifold fundamental group of Persson - Horikawa - Noether surfaces.* (coll. S. Manfredini), Proc. of the Conf. 'Geometric theory of singular phenomena in P.D.E.'s', Cortona may 15-19 1995, I.N.D.A.M. Symposia Mathematica vol. XXXVIII, Cambridge Univ. Press (1998), 71- 90. [arXiv:alg-geom/9607005]
- [\*64 ] *Homological algebra and algebraic surfaces.* in "Algebraic Geometry", Santa Cruz 1995, Proc. of AMS Symp. Pure Math. 62, 1 AMS (1997), 3-56.
- [\*65 ] *On the scalar curvature of Einstein manifolds.* coll. Le Brun, *Math. Res. Letters* 4 (1997), 843-854.
- [\*66 ] *Fibred surfaces, varieties isogenous to a product and related moduli spaces.*, *Amer. J. Math.* 122 (2000), 1-44.
- [\*67 ] *Singular bidouble covers and the construction of interesting algebraic surfaces.*, Proceedings of the Warsaw Conference in honour of F. Hirzebruch's 70th Birthday , A.M.S. *Contemp. Math.* 241 (1999), 97-120 .
- [68 ] *On simply - connected Godeaux surfaces.* (coll. with R. Pignatelli), in 'Complex Analysis and algebraic Geometry', a Volume in memory of Michael Schneider, (T. Peternell F.O. Schreyer editors), de Gruyter, Berlin, (2000), 117-153.
- [\*69 ] *Focal Loci of Algebraic Varieties I* coll. with C. Trifogli, Special issue in honor of Robin Hartshorne. *Comm. Algebra* 28 (2000), no. 12, 6017-6057. [arXiv:math/0005096 ]
- [70 ] *Review of the book "Discriminants, resultants and multidimensional determinants by I. M. Gelfand, M. M. Kapranov and A.V. Zelevinsky* *Bull. Amer. Math. Soc.* 37 (2000), 183-198.

- [71 ] *Hilbert presso la GEORG AUGUST UNIVERSITÄT GÖTTINGEN : Ieri ed oggi* The ideas of David Hilbert (Italian) (Catania, 1999). *Matematiche* (Catania) 55 (2000), suppl. 1, 7–24.
- [72 ] *Hilbert e la teoria degli invarianti* The ideas of David Hilbert (Italian) (Catania, 1999). *Matematiche* (Catania) 55 (2000), suppl. 1, 25–46.
- [\*73 ] *Real hyperelliptic surfaces and the orbifold fundamental group* coll. with P. Frediani, *Journal of the Inst. Math. Jussieu* **2** (2) ,(2003) 169-233.
- [\*74 ] *Moduli spaces of surfaces and real structures*, *Annals of Math.* 158, n.2 (2003), 577-592.
- [\*75 ] *Some remarks on the universal cover of an open K3 surface*, coll. with JongHae Keum, Keiji Oguiso, *Mathematische Annalen*, 325, n.2 (2003), 279-286.
- [\*76 ] *Quadratic sheaves and self linkage.* (coll. G. Casnati), *Asian Jour. Math.* vol. 6, NO. 4, (2002), 731-742.
- [77 ] *Invertible sheaves and extension classes of 0-dimensional schemes* , appendix (pages 328-332) to *Adjoint divisors on algebraic curves*, by Marco Franciosi, *Advances in Math.* 186 (2004), 317-333.
- [\*78 ] *Canonical rings of surfaces whose canonical system has base points*, coll. with I. Bauer and R. Pignatelli, in *Complex Geometry*, Collection of papers dedicated to Hans Grauert, Springer (2002), 37-72 . [arXiv:math/0111029]
- [\*79 ] *Fibrations of low genus, I*, coll. with R. Pignatelli, *Annales Sci. École Norm. Sup.* (4) 39 (2006), no. 6, 1011–1049.
- [\*80 ] *Canonical projections of irregular algebraic surfaces* (coll. F.O. Schreyer), in "Algebraic Geometry, A Volume in memory of Paolo Francia", Beltrametti, Catanese, Ciliberto, Lanteri, Pedrini editors, de Gruyter (2002), 79-116. [arXiv:math/0207253]
- [\*81 ] *Deformation types of real and complex manifolds*, Proc. of the Chen-Chow Memorial Conference, Contemporary trends in algebraic geometry and algebraic topology (Tianjin, 2000), 195–238, *Nankai Tracts Math.*, 5, World Sci. Publishing, River Edge, NJ, 2002. [ arXiv:math/0111245 ]
- [82 ] *Symplectic structures of algebraic surfaces and deformation.*, math.AG/0207254, 14 pages.
- [\*83 ] *QED for algebraic varieties*, *Jour. Differential Geometry*, 77 no. 1, (2007) , 43 –75.
- [\*84 ] *Symmetry and Variation of Hodge Structures*, coll. I. Bauer, *Asian Jour. Math.*, vol. 8, n.2, Volume in honour of Siu’s 60-th birthday, (2004), 363-390.

- [\*85 ] *Deformation in the large of some complex manifolds, I* Ann. Mat. Pura Appl. (4) 183, Volume in Memory of Fabio Bardelli, (2004), no. 3, 261–289.
- [86 ] *From Abel’s Heritage: transcendental objects in algebraic geometry and their algebrization*, in 'The legacy of Niels Henrik Abel', 349–394, Springer, Berlin, (2004). [arXiv:math/0307068]
- [\*87 ] *Even sets of nodes on sextic surfaces*, coll. with F. Tonoli, Jour. European Math. Soc. 9, no.4 (2007), 705 –737.
- [\*88 ] *Fibred Kähler and quasi projective groups*, Advances in Geometry, suppl. , Special Issue dedicated to A. Barlotti’s 80-th birthday (2003), Adv. Geom. suppl., (2003) S13–S27.
- [\*89 ] *Some new surfaces with  $p_g = q = 0$* , coll. I. Bauer, in 'The Fano Conference', 123–142, Univ. Torino, Turin, (2004). [arXiv:math/0310150 ]
- [\*90 ] *Diffeomorphism of simply connected algebraic surfaces* J. Differential Geom. 76 (2007), no. 2, 177–213.
- [91 ] *Trecce, Mapping class group, fibrazioni di Lefschetz ed applicazioni al diffeomorfismo di superficie algebriche*, Rendiconti dell’ Istituto Lombardo, Accademia di Scienze e Lettere, Incontro di studio n. 36, Luigi Cremona: Convegno di studi matematici (2005), 207-235 . [arXiv:math/0405300 ]
- [\*92 ] *The moduli space of surfaces with  $K^2 = 6$  and  $p_g = 4$* , coll. Ingrid C. Bauer, Roberto Pignatelli , Math. Ann. 336 (2006), no. 2, 421–438.
- [\*93 ] *The Maximum Likelihood Degree.*, coll. with Serkan Hosten, Amit Khetan, Bernd Sturmfels, Amer. J. Math. 128 (2006), no. 3, 671–697.
- [\*94 ] *Beauville surfaces without real structures, I*, coll. with Ingrid Bauer, Fritz Grunewald, in 'Geometric methods in algebra and number theory', (editors: F. Bogomolov - Y. Tschinkel), Progress in Mathematics 235, Birkhäuser (2005), 1– 42.[arXiv:math/0408025]
- [95 ] *The 3-cuspidal quartic and braid monodromy of degree 4 coverings*, coll. with Bronislaw Wajnryb ,in ' Projective varieties with unexpected properties', , Walter de Gruyter, Berlin( 2005),113–129. [arXiv:math/0411235]
- [\*96 ] *Deformation in the large of some complex manifolds, II*, coll. Paola Frediani, Berhanu, Shiferaw (ed.) et al., Recent progress on some problems in several complex variables and partial differential equations. Papers presented at the international conferences on partial differential equations and several complex variables, Wuhan, China, June 9–13, 2004 and on complex geometry and related fields, Shanghai, China, June 21–24, 2004. Providence, RI: American Mathematical Society (AMS). Contemporary Mathematics 400, 21-42 (2006). [arXiv:math/0507508 ]

- [\*97 ] *The Noether inequality for smooth minimal 3-folds.*, coll. with Meng Chen and De-Qi Zhang, *Math. Res. Letters* 13, n.4 (2006), 653-666.
- [98 ] *Real structures on torus bundles and their deformations*, coll. Paola Frediani, Chen, Zhijie (ed.) et al., *Proceedings of the international conference on complex geometry and related fields*, Shanghai, China, 2004. Providence, RI: American Mathematical Society (AMS); Somerville, MA: International Press. *AMS/IP Studies in Advanced Mathematics* 39, 37-61 (2007). [arXiv:math/0601108]
- [\*99 ] *Chebycheff and Belyi Polynomials, Dessins d'Enfants, Beauville Surfaces and Group Theory*, plenary talk at the Mediterranean Congress, coll. with I. Bauer, F. Grunewald, *Mediterranean Journal of mathematics* vol. 3, n. 2 (2006), 121-146.[arXiv:math/0605258]
- [\*100 ] *Surface classification and local and global fundamental groups I*, *Atti Accad. Naz. Lincei, Cl. Sci. Fis. Mat. Nat., IX. Ser., Rend. Lincei, Mat. Appl.* 17, No. 2, 135-153 (2006).[arXiv:math/0602128]
- [101 ] *Complex surfaces of general type: some recent progress.*, coll. I Bauer, R. Pignatelli, in 'Global aspects of complex geometry', ( F. Catanese et al. editors) 1–58, Springer, Berlin, ( 2006).[arXiv:math/0602477]
- [\*102 ] *The classification of surfaces with  $p_g = q = 0$  isogenous to a product of curves*, coll. with I. Bauer, F. Grunewald, in 'Pure and Applied Math Quarterly', volume in honour of F. Bogomolov's 60-th birthday, *Pure Appl. Math. Q.* 4 (2008), no. 2, part 1, 547–586.[arXiv:math/0610267 ]
- [\*103 ] *A volume maximizing canonical surface in 3-space*, coll. with I. Bauer, *Comment. Math. Helv.* 83 (2008), no. 2, 387–406.
- [\*104 ] *Canonical symplectic structures and deformations of algebraic surfaces*, *Comm. in Contemp. Math.* 11 (2009), n. 3, 481–493.[arXiv:math/0608110]
- [\*105 ] *Double Kodaira fibrations* , coll.with Sönke Rollenske, *Journal. Reine Angew. Math.* 628 (Crelle) (2008), 205–233.
- [\*106 ] *Real singular Del Pezzo surfaces and 3-folds fibred by rational curves, I*, coll. Frédéric Mangolte, *Mich. Math. J.* 56, No. 2, (2008) 357-373 .
- [\*107 ] *Differentiable and deformation type of algebraic surfaces, real and symplectic structures*, in : Catanese, Fabrizio (ed.) et al., *Symplectic 4-manifolds and algebraic surfaces*. Lectures given at the C.I.M.E. summer school, Cetraro, Italy, September 2-10, 2003. Berlin: Springer; Florence: Fondazione C.I.M.E. *Lecture Notes in Mathematics* 1938, 55-167 (2008).
- [\*108 ] *A remarkable moduli space of rank 6 vector bundles related to cubic surfaces*, coll. Fabio Tonoli , in "Vector bundles and low codimensional subvarieties:



state of the art and recent developments” , edited by Casnati, Catanese, Notari, ”Quaderni di Matematica” della Seconda Universita’ di Napoli, QM n. 21, (2007), 41–87.[arXiv:0705.2184 ]

- [109 ] *The absolute Galois group acts faithfully on the connected components of the moduli space of surfaces of general type*, coll. I. Bauer, F. Grunewald, arXiv:0706.1466 .
- [110 ] *Matematica: scienza, gioco od arte ?* Bollettino U.M.I. 'La Matematica nella Societa' e nella Cultura', Serie VIII, vol. X-A , (I) 1 (2008), no. 1, 1–21, 193.
- [110bis ] *Mathematik: Wissenschaft, Spiel oder Kunst ?* translation and elaboration of [110], in cooperation with Ingrid Bauer Spektrum Jahr der Mathematik, Universität Bayreuth, 1/08 (2008), 31–39.
- [\*111 ] *Real singular Del Pezzo surfaces and 3-folds fibred by rational curves, II*, coll. Frédéric Mangolte, Annales Scient. École Norm. Sup. (4), 42 (2009), 531–557.
- [\*112 ] *The rationality of certain moduli spaces of curves of genus 3* , coll. with I. Bauer, Cohomological and geometric approaches to rationality problems, 1–16, Progr. Math., 282, Birkhäuser Boston, Inc., Boston, MA, 2010. [arXiv:0805.2534]
- [\*113 ] *Quotients of a product of curves, new surfaces with  $p_g = 0$  and their fundamental groups* , coll. with I. Bauer, F. Grunewald and R. Pignatelli, Amer. J. Math. 134 (2012), no. 4, 993–1049.
- [\*114 ] *On varieties whose universal cover is a product of curves*, coll. M. Franciosi, in ' Interactions of classical and numerical algebraic geometry', volume in honour of Andrew Sommese's 60-th birthday, American Mathematical Society (AMS) Contemporary Mathematics 496 (2009),157–179. [arXiv:0812.4317]
- [115 ] *Algebraic surfaces and their moduli spaces: real, differentiable and symplectic structures*, arXiv:0812.4318 , plenary lecture at the joint Meeting of U.M.I. and D.M.V. , Perugia, june 2007, Bollettino U.M.I., sez. B., Serie IX, Vol. II, N.3 (2009), 537-558. [arXiv:0812.4318]
- [116 ] *La classificazione delle varietà algebriche*, in the Encyclopedia volume II ' La Matematica : Problemi e teoremi', Einaudi, Torino (2008), 643–704.
- [\*117 ] *The moduli space of Keum-Naie surfaces*, coll. I. Bauer, Groups Geom. Dyn. 5 (2011), no. 2, 231–250.
- [\*118 ] *Burniat surfaces I: fundamental groups and moduli of primary Burniat surfaces*, coll. I. Bauer, Classification of algebraic varieties, 49–76, EMS Ser. Congr. Rep., Eur. Math. Soc., Zürich, (2011). [arXiv:0909.3699]
- [\*119 ] *Moduli spaces and braid monodromy types of bidouble covers of the quadric*, coll. M. Loenne, B. Wajnryb, Geom. Topol. 15 (2011), no. 1, 351–396.

- [\*120 ] *Burniat surfaces II: secondary Burniat surfaces form three connected components of the moduli space* coll. I. Bauer, *Invent. Math.* 180 (2010), no. 3, 559–588.
- [\*121 ] *On volume preserving complex structures on real tori* coll. K. Oguiso, T. Peternell, *Kyoto J. Math.* 50 (2010), no. 4, 753–775.[arXiv:0912.5313 ]
- [\*122 ] *Irreducibility of the space of dihedral covers of the projective line of a given numerical type.* *Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. Lincei (9) Mat. Appl.* 22 (2011), no. 3, 291–309.
- [123 ] *Moduli spaces of surfaces and monodromy invariants.* coll. with Michael Lönne, Bronislaw Wajnryb, *Proceedings of the Gökova Geometry-Topology Conference 2009*, 58–98, Int. Press, Somerville, MA, (2010). [arXiv:1003.3871]
- [124 ] *Surfaces of general type with geometric genus zero: a survey*, coll. with Ingrid Bauer, Roberto Pignatelli, ‘Complex and differential geometry’, 1–48, *Springer Proc. Math.*, 8, Springer, Heidelberg, (2011).[arXiv:1004.2583]
- [\*125 ] *Irreducibility of the space of cyclic covers of algebraic curves of fixed numerical type and the irreducible components of  $Sing(\overline{\mathfrak{M}}_g)$*  ”The Conference on Geometry” in honour of Shing-Tung Yau’s 60-th birthday, *Advances in geometric analysis*, 281–306, *Adv. Lect. Math. (ALM)*, 21, Int. Press, Somerville, MA, (2012).[arXiv:1011.0316]
- [\*126 ] *A Characterization of Varieties whose Universal Cover is the Polydisk or a Tube Domain* Catanese, Fabrizio; Di Scala, Antonio J., *Math. Ann.* 356 (2013), no. 2, 419–438.
- [\*127 ] *Burniat surfaces III: deformations of automorphisms and extended Burniat surfaces* Bauer, I.; Catanese, F. , *Doc. Math.* 18 (2013), 1089–1136.
- [\*128 ] *A Superficial Working Guide to Deformations and Moduli* Handbook of moduli, in honour of David Mumford, Vol. I, 161–215, *Adv. Lect. Math. (ALM)*, 24, Int. Press, Somerville, MA, (2013). [arXiv:1106.1368]
- [\*129 ] *Cayley forms and self dual varieties* *Proc. Edinb. Math. Soc. (2)* 57 (2014), no. 1, volume in honour of V. Shokurov’s 60-th birthday, 89–109.
- [\*130 ] *Inoue type manifolds and Inoue surfaces: a connected component of the moduli space of surfaces with  $K^2 = 7, p_g = 0$*  Ingrid Bauer, Fabrizio Catanese, ‘Geometry and arithmetic’, dedicated to the 60-th birthday of Gerard van der Geer, 23– 56, *EMS Ser. Congr. Rep.*, *Eur. Math. Soc.*, Zürich, (2012).[arXiv:1205.7042]
- [131 ] *Surfaces with  $p_g = 0$ : Constructions and Moduli spaces, Burniat surfaces and deformations of automorphisms* Fabrizio Catanese (Universität Bayreuth, Germany) Published in the *Proceedings of the Kinosaki Symposium on Algebraic Geometry*, (2011).[arXiv:1205.7043]

- [\*132 ] *The irreducible components of the moduli space of dihedral covers of algebraic curves* Fabrizio Catanese, Michael Lönne, Fabio Perroni, Groups Geom. Dyn. 9, No. 4, 1185–1229 (2015).
- [\*133 ] *Burniat-type surfaces and a new family of surfaces with  $p_g = 0, K^2 = 3$ ,* Bauer, I.; Catanese, F. . Rend. Circ. Mat. Palermo (2) 62 (2013), no. 1, 37–60.
- [\*134 ] *The direct image of the relative dualizing sheaf needs not be semiample.* Catanese, Fabrizio; Dettweiler, Michael, C. R. Math. Acad. Sci. Paris 352 (2014), no. 3, 241–244.
- [\*135 ] *A characterization of varieties whose universal cover is a bounded symmetric domain without ball factors* Catanese, Fabrizio; Di Scala, Antonio J. , Adv. Math. 257 (2014), 567–580.
- [\*136 ] *The moduli space of even surfaces of general type with  $K^2 = 8, p_g = 4$  and  $q=0$ ,* Catanese, Fabrizio; Liu, Wenfei; Pignatelli, Roberto, J. Math. Pures Appl. (9) 101 (2014), no. 6, 925–948.
- [137 ] *Erratum to: Burniat surfaces II: secondary Burniat surfaces form three connected components of the moduli space* Bauer, I.; Catanese, F. , Invent. Math. 197 (2014), no. 1, 237–240.
- [\*138 ] *Unirationality of Ueno-Campana’s threefold,* Catanese, Fabrizio; Oguiso, Keiji; Truong, Tuyen Trung, Manuscripta Math. 145 (2014), no. 3-4, 399–406.
- [\*139 ] *Genus stabilization for moduli of curves with symmetries* coll. with Michael Lönne, Fabio Perroni, Algebr. Geom. 3, No. 1, 23–49 (2016).
- [\*140 ] *Faithful actions of the absolute Galois group on connected components of moduli spaces* coll. with Ingrid Bauer, Fritz Grunewald, Invent. math. (2015) 199:859–888  
DOI 10.1007/s00222-014-0531-2.
- [\*141 ] *Caustics of plane curves, their birationality and matrix projections,* ‘Algebraic and complex geometry’, Springer Proceedings in Mathematics and Statistics 71 (2014), 109–122 , in honour of Klaus Hulek’ s 60-th birthday.  
[<http://arxiv.org/abs/1304.3861>]
- [\*142 ] *Answer to a question by Fujita on Variation of Hodge Structures,* coll. with Michael Dettweiler, Advanced Studies in Pure Mathematics 74, (2017) “Higher Dimensional Algebraic Geometry - in honour of Professor Yujiro Kawamata’s sixtieth birthday” pp. 73–102, [arXiv:1311.3232.]

- [143 ] *The fundamental group and torsion group of Beauville surfaces* coll. with Ingrid Bauer, Davide Frapporti, in: "Beauville Surfaces and Groups", edited by Bauer, Ingrid (ed.) et al.. Proceedings of the conference, Newcastle, UK, June 7–9, 2012. Cham: Springer. Springer Proceedings in Mathematics and Statistics 123, 1–14 (2015).
- [\*144 ] *Subcanonical Graded Rings Which Are Not Cohen-Macaulay, with Appendix: A non  $Q$ -Gorenstein Cohen-Macaulay cone  $X$  with  $K_X$   $Q$ -Cartier*, by Fabrizio Catanese, Appendix by Jonathan Wahl. In: Hacon, Christopher D. (ed.) et al., Recent advances in algebraic geometry. A volume in honor of Rob Lazarsfeld 's 60th birthday. Based on the conference, Ann Arbor, MI, USA, May 16–19, 2013. Cambridge: Cambridge University Press. London Mathematical Society Lecture Note Series 417, 92–101 (2014).
- [\*145 ] *Generalized Burniat type surfaces and Bagnera-de Franchis varieties* coll. with Ingrid Bauer, Davide Frapporti, in the Kodaira Centennial issue of the Journal of Mathematical Sciences, the University of Tokyo, J. Math. Sci., Tokyo 22, No. 1, 55–111 (2015).
- [\*146 ] *Topological methods in moduli theory* Bull. Math. Sci. 5, No. 3, 287–449 (2015).
- [147 ] *Topological methods in algebraic geometry*, Zannier, Umberto (ed.), Colloquium De Giorgi 2013 and 2014. Lectures from the colloquium, Scuola Normale Superiore, Pisa, Italy, 2013 and 2014. Pisa: Edizioni della Normale. Colloquia 5, 37–77 (2015).
- [\*148 ] *Vector bundles on curves coming from variation of Hodge structures*. Catanese, Fabrizio; Dettweiler, Michael. Int. J. Math. 27, No. 7, Article ID 1640001, 25 p. (2016).
- [\*149 ] *On the unirationality of higher dimensional Ueno-type manifolds* coll. with Keiji Oguiso, Alessandro Verra, special volume dedicated to Lucian Badescu on the occasion of his 70th birthday, Rev. Roumaine Math. Pures Appl. 60 (2015), no. 3, 337–353.
- [150 ] *Monodromy and normal forms*. König, Wolfgang (ed.) et al., Karl Weierstraß (1815–1897). Aspekte seines Lebens und Werkes – aspects of his life and work. Wiesbaden: Springer Spektrum, 195–218 (2016).
- [\*151 ] *Higher dimensional Lemniscates: the geometry of  $r$  particles in  $n$ -space with logarithmic potentials*. coll. with Ingrid Bauer, Antonio Jose Di Scala, Ann. Sc. Norm. Super. Pisa Cl. Sci. (5) Vol. XVII (2017), 1091-1119.
- [\*152 ] *Kodaira fibrations and beyond: methods for moduli theory*. First version of the contribution to the 16–th Takagi lectures, in Celebration of the 100th Anniversary of Kodaira' s Birth, published in The Sixteenth Takagi Lectures,

28–29 November 2015, Tokyo, 37–102 (2015), The Math. Soc. of Japan and GSMS Univ. Tokyo.

- [\*153 ] *Canonical surfaces of higher degree.* dedicated to the 60-th birthday of Philippe Ellia, Rendiconti del Circolo Matematico di Palermo Series 2 April 2017, Volume 66, Issue 1, pp 43–51.  
<http://link.springer.com/article/10.1007/s12215-016-0274-6>.
- [\*154 ] *Dihedral Galois covers of algebraic varieties and the simple cases.* Fabrizio Catanese, Fabio Perroni, dedicated to Ugo Bruzzo on the occasion of his 60-th birthday, Journal of Geometry and Physics 118 (2017), 67–93,  
<http://dx.doi.org/10.1016/j.geomphys.2016.10.012>.
- [\*155 ] *On rigid compact complex surfaces and manifolds.* coll. with Ingrid Bauer, Adv. Math. 333, (2018) 620-669.
- [\*156 ] *Kodaira fibrations and beyond: methods for moduli theory.* Japan. J. Math. 12, 1–83 (2017) DOI: 10.1007/s11537-017-1569-x  
Final version of the contribution to the 16–th Takagi lectures, in Celebration of the 100th Anniversary of Kodaira’s Birth.
- [\*157 ] *Enriques’ classification in characteristic  $p > 0$  : the  $P_{12}$ -Theorem.* coll. with Binru Li, Nagoya Jour. 235 (2019), 201-226.  
<https://doi.org/10.1017/nmj.2018.8>
- [\*158 ] *Teichmüller spaces of Generalized Hyperelliptic Manifolds* coll. with Pietro Corvaja, Proceedings of the Conference ‘Complex and Symplectic Geometry’ (Cortona, June 2016), 39-49, Springer INdAM Ser. 21, (2017).
- [\*159 ] *On the canonical map of some surfaces isogenous to a product,* Contemp. Math. , AMS, Volume 712 (2018) 3-57, volume dedicated to Lawrence Ein on the occasion of his 60th birthday,  
<http://dx.doi.org/10.1090/conm/712/14341>.
- [\*160 ] *Deformation of a generically finite map to a hypersurface embedding,* coll. with Yongnam Lee, J. Math. Pures Appl. (9) 125 (2019), 175-188.  
<https://doi.org/10.1016/j.matpur.2018.06.024>.
- [\*161 ] *Fujita decomposition over higher dimensional base,* coll. with Yujiro Kawamata, European Journal of Mathematics 5, N. 3 (2019), 720–729,  
<https://doi.org/10.1007/s40879-018-0287-0>.
- [\*162 ] *Rigid Group Actions on Complex Tori are Projective (after Ekedahl),* coll. with Andreas Demleitner, arXiv:1711.05545, Commun. Contemp. Math. 22, No. 7, Article ID 1950092, 15 p. (2020), World Scientific Publishing Company 4 DOI: 10.1142/S0219199719500925

- [\*163 ] *The Bicanonical Map of Fake Projective Planes with an Automorphism*, coll. with Jong Hae Keum, *International Mathematics Research Notices*, (2018), Vol. 00, No. 0, pp. 1–22 Advance Access publication on Month XX, 2018 rny214, Published: 17 September 2018.  
<https://doi.org/10.1093/imrn/rny214>
- [\*164 ] *Del Pezzo surfaces, rigid line configurations and Hirzebruch-Kummer coverings*, coll. with Ingrid Bauer, *Boll. Unione Mat. Ital.* 12 n. 1-2, (2019), 43-62.  
 DOI 10.1007/s40574-018-0169-x, a volume of BUMI in memory of Paolo De Bartolomeis.
- [\*165 ] *Hyperelliptic Threefolds with group  $D_4$ , the Dihedral group of order 8*, coll. with Andreas Demleitner, arXiv: 1805.01835 (improved by [[166]]).
- [\*166 ] *The classification of Hyperelliptic threefolds*, coll. with Andreas Demleitner, arXiv: 1812.09754, ‘Groups, Geometry and Dynamics’. Volume 14, Issue 4, 2020, pp. 1447–1454, DOI: 10.4171/GGD/587 Published online: 2020-12-10
- [\*167 ]  $\mathfrak{S}_5$ -*symmetric equations for the Del Pezzo Surface of Degree 5*, coll. with Ingrid Bauer, arXiv: 1812.10715.
- [\*167bis ]  $\mathfrak{S}_5$ -*Equivariant Syzygies For The Del Pezzo Surface Of Degree 5*, coll. with Ingrid Bauer, *Rendiconti del Circolo Matematico di Palermo Series 2* (2020), 24 p., ISSN 0009-725X *Rend. Circ. Mat. Palermo, II. Ser* DOI 10.1007/s12215-020-00483-9
- [\*168 ] *The double point formula with isolated singularities and canonical embeddings*, coll. with Keiji Oguiso, arXiv:1902.04342, *J. London Math. Soc.* (2) 00 (2020) 1–20, doi:10.1112/jlms.12371.
- [\*169 ] *Cyclic Symmetry on Complex Tori and Bagnera- De Franchis Manifolds*, arXiv:1902.01507, Proceedings of the LMS Midlands Regional Meeting and Workshop held in Leicester June 2018, *Interactions between Geometry, Topology, Number Theory and Algebra*, Springer Nature Switzerland AG 2020 1 F. Neumann and S. Schroll (eds.), *Galois Covers, Grothendieck-Teichmüller Theory and Dessins d’Enfants*, Springer Proceedings in Mathematics and Statistics 330, (2020), 31-54, [https://doi.org/10.1007/978-3-030-51795-3\\_3](https://doi.org/10.1007/978-3-030-51795-3_3)
- [\*170 ] *The Moduli Space of smooth Ample Hypersurfaces in Abelian Varieties*, coll. with Yongnam Lee, arXiv:1903.07764, *Advances in Mathematics* 365 (2020) Article ID 107040, 17 p. DOI information: 10.1016/j.aim.2020.107040.
- [\*171 ] *Fibred algebraic surfaces and commutators in the Symplectic group*, coll. with Pietro Corvaja and Umberto Zannier, arXiv:1906.05806, *J. Algebra* 562 (2020), 200–228, <https://doi.org/10.1016/j.jalgebra.2020.06.023>.

- [\*172 ] *Canonical Maps of general Hypersurfaces in Abelian Varieties* coll. with Luca Cesarano, arXiv:2004.08303 , submitted.
- [\*173 ] *Homological stability for moduli spaces of curves with symmetry* , coll. with Michael Lönne and Fabio Perroni, in preparation.
- [\*174 ] *On topologically trivial automorphisms of compact Kähler manifolds and algebraic surfaces* , coll. with Wenfei Liu, arXiv:2012.11272, 28 pages, to appear in a volume of the Rend. Lincei Mat. in memory of Edoardo Vesentini.
- [\*175 ] *Cyclic and Abelian coverings of real varieties*, coll. with Michael Lönne and Fabio Perroni, 38 pages manuscript, April 2021.
- [\*176 ] *Varieties of Nodal Surfaces, Coding Theory and Discriminants of Cubic Hypersurfaces, I, II, III*, with various coauthors, preliminary version, 135 pages (2020).
- [\*176 ] *Kummer quartic surfaces, strict self-duality, and more* , arXiv:2101.10501, 30 pages, submitted to a Springer volume in honour of the 70-th birthday of Ciro Ciliberto.
- [\*178 ] *Openness of birationality*, in preparation.

## BOOKS EDITED

- [I ] *Problems in the theory of surfaces and their classification*. Catanese, F.(ed.); Ciliberto, C. (ed.); Cornalba, M. (ed.), Papers from the meeting held at the Scuola Normale Superiore, Cortona, Italy, October 10-15, 1988. *Symposia Mathematica*. 32. London: Academic Press, Rome: Istituto Nazionale di Alta Matematica Francesco Severi, xii, 410 p. (1991). [ISBN 0-12-612232-6/hbk]
- [II ] *Classification of irregular varieties. Minimal models and Abelian varieties*. Ballico, Edoardo (ed.); Catanese, Fabrizio (ed.); Ciliberto, Ciro (ed.) Proceedings of a Conference held in Trento, Italy, 17-21 December, 1990. *Lecture Notes in Mathematics*. 1515. Berlin etc.: Springer-Verlag, 149 p. (1992). [ISBN 3-540-55295-2/pbk]
- [III ] *Transcendental methods in algebraic geometry*. Catanese, F.(ed.); Ciliberto, C. (ed.) Lectures given at the 3rd session of the Centro Internazionale Matematico Estivo (CIME), Cetraro, Italy, July 4-12, 1994. *Lecture Notes in Mathematics*. 1646. Cetraro: Springer, 258 p. (1996). [ISBN 3-540-62038-9/pbk]
- [IV ] *Arithmetic geometry*. Catanese, Fabrizio (ed.) Proceedings of a symposium, Cortona, Arezzo, Italy, October 16-21, 1994. *Symposia Mathematica*. 37. Cambridge: Cambridge University Press, x, 300 p.(1997). [ISBN 0-521-59133-3/hbk]
- [V ] *New trends in algebraic geometry*. Hulek, Klaus (ed.); Catanese, Fabrizio (ed.); Peters, Chris (ed.); Reid, Miles (ed.) Selected papers presented at the Euro conference, Warwick, UK, July 1996. *London Mathematical Society Lecture Note Series*. 264. Cambridge: Cambridge University Press. x, 484 p. (1999).
- [VI ] *Complex Geometry*. Bauer, Ingrid (ed.); Catanese, Fabrizio (ed.); Kawamata, Yujiro (ed.); Peternell, Thomas (ed.); Siu, Yum-Tong. Collections of papers dedicated to Hans Grauert. Berlin etc. Springer Verlag XXII, 340 p. (2002).
- [VII ] *Algebraic Geometry*. Beltrametti, Mauro (ed.); Catanese, Fabrizio (ed.); Ciliberto, Ciro (ed.); Lanteri, Antonio (ed.); Pedrini, Claudio (ed.) . A Volume in memory of Paolo Francia. Walter de Gruyter , Berlin - New York (2002).
- [VIII ] *Global aspects of complex geometry*. F. Catanese, H. Esnault, A Huckleberry, K. Hulek, T. Peternell, editors, Springer Verlag (2006).
- [IX ] *Vector bundles and low codimensional subvarieties: state of the art and recent developments*, G. Casnati, F. Catanese, R. Notari editors, "Quaderni di Matematica" della Seconda Universita' di Napoli, QM n. 21, (2007), 388 pp.



- [X ] *Symplectic 4-manifolds and Algebraic surfaces*, Catanese, F.(ed.);G. Tian (ed.), Lectures given at the C.I.M.E. summer school, Cetraro, Italy, September 2-10, 2003. Lecture Notes in Mathematics 1938. Berlin: Springer; Florence: Fondazione C.I.M.E. xiii, 345 p. (2008).
- [XI ] *Homological mirror symmetry and tropical geometry*. Castano-Bernard, Ricardo (ed.); Catanese, Fabrizio (ed.); Kontsevich, Maxim (ed.); Pantev, Tony (ed.); Soibelman, Yan (ed.); Zharkov, Ilia (ed.) Based on the workshop on mirror symmetry and tropical geometry, Cetraro, Italy, July 2–8, 2011. Lecture Notes of the Unione Matematica Italiana 15, Springer Verlag.

#### OBERWOLFACH ABSTRACTS

- [1 ] *Mini-Workshop: Classification of Surfaces of General Type with Small Invariants*. Abstracts from the mini-workshop held February 15–21, 2004. Organized by Fabrizio Catanese and Ciro Ciliberto. Oberwolfach Reports. Vol. 1, no. 1. Oberwolfach Rep. 1 (2004), no. 1, 439–477.
- [2 ] *Komplexe algebraische Geometrie. [Complex algebraic geometry]* Abstracts from the workshop held February 13–19, 2005. Organized by Fabrizio Catanese, Yujiro Kawamata, Gang Tian and Eckart Viehweg. Oberwolfach Reports. Vol. 2, no. 1. Oberwolfach Rep. 2 (2005), no. 1, 407–463.
- [3 ] *Komplexe algebraische Geometrie. [Complex algebraic geometry]* Abstracts from the workshop held October 1–6, 2007. Organized by Fabrizio Catanese, Yujiro Kawamata, Gang Tian and Eckart Viehweg. Oberwolfach Reports. Vol. 4, no. 4. Oberwolfach Rep. 47 (2007), 2791–2849.
- [4 ] *Komplexe algebraische Geometrie. [Complex algebraic geometry]* Abstracts from the workshop held September 27–October 3, 2009. Organized by Fabrizio Catanese, Yujiro Kawamata, Gang Tian and Eckart Viehweg. Oberwolfach Reports. Vol. 6, no. 4. Oberwolfach Rep. 6 (2009), no. 4, 2483–2543.
- [5 ] *Complex algebraic geometry*. Abstracts from the workshop held September 25–October 1, 2011. Organized by Fabrizio Catanese, Yujiro Kawamata, Bernd Siebert and Gang Tian. Oberwolfach Reports. Vol. 8, no. 3. Oberwolfach Rep. 8 (2011), no. 3, 2669–2733.
- [6 ] *Complex algebraic geometry*. Abstracts from the workshop held May 26–June 1, 2013. Organized by Fabrizio Catanese, Christopher Hacon, Yujiro Kawamata and Bernd Siebert. Oberwolfach Rep. 10 (2013), no. 2, 1563–1627.
- [7 ] *Subgroups of Cremona groups*. Abstracts from the workshop held June 17–23, 2018. Organized by Fabrizio Catanese, Ivan Cheltsov, Julie Déserti and Yuri Prokhorov. Oberwolfach Rep. 15 (2018), no. 2, 1685–1743.