

## PUBLICATIONS

Olivier DEBARRE

### Expository articles

- [1] Sur la cohomologie de  $N(r, d)$ , in *Modules des Fibrés Stables sur les Courbes Algébriques*, 105–128, J.-L. Verdier and J. Le Potier editors, Progress in Mathematics **54**, Birkhäuser, 1985.
- [2] The Schottky Problem: An Update, in *Current Topics In Algebraic Geometry*, 57–64, H. Clemens and J. Kollar editors, M.S.R.I. Publications **28**, Cambridge University Press, 1995.
- [3] Variétés de Fano, Exposé 827, *Séminaire Bourbaki 1996/97*, Astérisque **245** (1997), 197–221.
- [4] Fano Varieties, in *Higher Dimensional Varieties and Rational Points, Budapest, 2001*, 93–132, K. Böröczky Jr., J. Kollar, and T. Szamuely editors, Bolyai Society Mathematical Studies **12**, Springer-Verlag, Berlin, 2003.
- [5] Variétés rationnellement connexes, Exposé 905, *Séminaire Bourbaki, 2001/02*, Astérisque **290** (2003), 243–266.
- [6] Classes de cohomologie positives dans les variétés kähleriennes compactes, Exposé 943, *Séminaire Bourbaki, 2004/05*, Astérisque **307** (2006), 199–227.
- [7] Systèmes pluricanoniques sur les variétés de type général, Exposé 970, *Séminaire Bourbaki, 2006/07*, Astérisque **311** (2008), 119–140.
- [8] Periods and moduli, in *Current Developments in Algebraic Geometry*, L. Caporaso, J. McKernan, M. Mustaţă, and M. Popa editors, MSRI Publications, 2010.
- [9] Curves of low degrees on Fano varieties, in *Birational Geometry, Rational Curves, and Arithmetic*, F. Bogomolov, B. Hassett, and Y. Tschinkel editors, Simons Symposia, Springer, 2013.
- [10] Cohomological characterizations of the complex projective space, arXiv:1512.04321.
- [11] On the Geometry of Hypersurfaces of Low Degrees in the Projective Space in *Algebraic Geometry and Number Theory, Istanbul, 2014*, 55–90, H. Mourtada, C. G. Sarıoğlu, C. Soulé, and A. Zeytin editors, Progress in Mathematics **321**, Springer, 2017.
- [12] Hyperkähler manifolds, with an appendix by E. Macrì, *Milan J. Math.* **90** (2022), 305–387.
- [13] with P. BERI.– On the Hodge and Betti numbers of hyper-Kähler manifolds, *Milan J. Math.* **90** (2022), 417–431.

### Books

- [1a] *Tores et variétés abéliennes complexes*, Cours Spécialisés **6**, Société mathématique de France, 1999.
- [1b] *Complex Tori and Abelian Varieties* (English translation of [1a]), SMF/AMS Texts and Monographs **11**, American Mathematical Society, 2005.
- [2] *Higher-Dimensional Algebraic Geometry*, Universitext, Springer Verlag, 2001.

## Research articles

- [1] Inégalités numériques pour les surfaces de type général, *Bull. Soc. math. France* **110** (1982), 319–346.
- [2] Un contre-exemple au théorème de Torelli pour les variétés symplectiques irréductibles, *C. R. Acad. Sci. Paris* **299** (1984), 681–684.
- [3] Sur la démonstration de A. Weil du théorème de Torelli pour les courbes, *Compos. Math.* **58** (1986), 3–11.
- [4] with A. BEAUVILLE.– Une relation entre deux approches du problème de Schottky, *Invent. Math.* **86** (1986), 195–207.
- [5] Annulation de thêta constantes sur les variétés abéliennes de dimension quatre, *C. R. Acad. Sci. Paris* **305**, Série I (1987), 885–888.
- [6] with A. BEAUVILLE.– Sur le problème de Schottky pour les variétés de Prym, *Ann. Sc. Norm. Sup. Pisa* **14** (1987), 613–623.
- [7] Sur les variétés abéliennes dont le diviseur thêta est singulier en codimension 3, *Duke Math. J.* **56** (1988), 221–273.
- [8] Sur les variétés de Prym des courbes tétragonales, *Ann. Sc. École Norm. Sup.* **21** (1988), 545–559.
- [9] with A. BEAUVILLE, R. DONAGI, and G. VAN DER GEER.– Sur les fonctions thêta d’ordre deux et les singularités du diviseur thêta, *C. R. Acad. Sci. Paris* **307** (1988), 481–484.
- [10] Sur le problème de Torelli pour les variétés de Prym, *Amer. J. Math.* **111** (1989), 111–134.
- [11] with F. CATANESE.– Surfaces with  $K^2 = 2$ ,  $p_g = 1$ ,  $q = 0$ , *J. reine angew. Math.* **395** (1989), 1–55.
- [12] Le théorème de Torelli pour les intersections de trois quadriques, *Invent. Math.* **95** (1989), 507–528.
- [13] Images lisses d’une variété abélienne simple, *C. R. Acad. Sci. Paris* **309** (1989), 119–122.
- [14] Une démonstration élémentaire du théorème de Torelli pour les intersections de trois quadriques de dimension impaire, in *Arithmetic of Complex Manifolds, Proceedings, Erlangen 1988*, Springer Lecture Notes **1399**, Springer Verlag, 1989.
- [15] with A. BEAUVILLE.– Sur les fonctions thêta du second ordre, in *Arithmetic of Complex Manifolds, Proceedings, Erlangen 1988*, Springer Lecture Notes **1399**, Springer Verlag, 1989.
- [16] The trisecant conjecture for Pryms, in *Theta Functions, Bowdoin 1987*, Proceedings of Symposia in Pure Mathematics **49**, Part 1, 1989.
- [17] Variétés de Prym et ensembles d’Andreotti et Mayer, *Duke Math. J.* **60** (1990), 599–630.
- [18] Sur le théorème de Torelli pour les solides doubles quartiques, *Compos. Math.* **73** (1990), 161–187.
- [19] with Y. LASZLO.– Sur le lieu de Noether-Lefschetz pour les variétés abéliennes, *C. R. Acad. Sci. Paris* **311** (1990), 337–340.
- [20] with T. TON-THAT.– Representations of  $SO(k, \mathbf{C})$  on harmonic polynomials on a null cone, *Proc. Amer. Math. Soc.* **112** (1991), 31–44.
- [21] Trisecant lines and Jacobians, *J. Algebraic Geom.* **1** (1992), 5–14.
- [22] Vers une stratification de l’espace des modules des variétés abéliennes principalement polarisées, in *Complex Algebraic Varieties, Proceedings, Bayreuth 1990*, Springer Lecture Notes **1507**, 1992.
- [23] Le lieu des variétés abéliennes dont le diviseur thêta est singulier a deux composantes, *Ann. Sc. École Norm. Sup.* **25** (1992), 687–708.

- [24] with R. FAHLAOUI.– Abelian Varieties In  $W_d^r(C)$  And Points Of Bounded Degrees On Algebraic Curves, *Compos. Math.* **88** (1993), 235–249.
- [25] Degrees of curves in abelian varieties, *Bull. Soc. math. Fr.* **122** (1994), 101–119.
- [26] with M. KLASSEN.– Points of Low Degree on Smooth Plane Curves, *J. reine angew. Math.* **446** (1994), 81–87.
- [27] with K. HULEK and J. SPANDAW.– Very Ample Linear Systems on Abelian Varieties, *Math. Ann.* **300** (1994), 181–202.
- [28] Minimal cohomology classes and Jacobians, *J. Algebraic Geom.* **4** (1995), 321–335.
- [29] Théorèmes de connexité et variétés abéliennes, *Amer. J. Math.* **117** (1995), 787–805.
- [30] Fulton-Hansen and Barth-Lefschetz theorems for subvarieties of abelian varieties, *J. reine angew. Math.* **467** (1995), 187–197.
- [31] Sous-variétés de codimension 2 d’une variété abélienne, *C. R. Acad. Sci. Paris* **321** (1995), 1237–1240.
- [32] Sur un théorème de connexité de Mumford pour les espaces homogènes, *Manuscripta Math.* **89** (1996), 407–425.
- [33] Polarisations sur les variétés abéliennes produits, *C. R. Acad. Sci. Paris* **323**, Série I (1996), 631–635.
- [34] Théorèmes de connexité pour les produits d’espaces projectifs et les grassmanniennes, *Amer. J. Math.* **118** (1996), 1347–1367.
- [35] Trisecant lines and Jacobians, II, *Compos. Math.* **107** (1997), 177–186.
- [36] with L. MANIVEL.– Sur la variété des espaces linéaires contenus dans une intersection complète, *Math. Ann.* **312** (1998), 549–574.
- [37] On the Euler characteristic of generalized Kummer varieties, *Amer. J. Math.* **121** (1999), 577–586.
- [38] Théorèmes de Lefschetz pour les lieux de dégénérescence, *Bull. Soc. math. France* **128** (2000), 101–126.
- [39] with L. MANIVEL.– Sur les intersections complètes réelles, *C. R. Acad. Sci. Paris* **331** (2000), 887–892.
- [40] appendix to Irreducibility, Brill–Noether loci, and Vojta’s inequality, by T. TUCKER, *Trans. Amer. Math. Soc.* **354** (2002), 3011–3029.
- [41] with L. BONAVERO, C. CASAGRANDE, and S. DRUEL.– Sur une conjecture de Mukai, *Comment. Math. Helv.* **78** (2003), 601–626.
- [42] Seshadri Constants of Abelian Varieties, *The Fano Conference, Proceedings, Torino 2002*, 379–394, A. Collino, A. Conte, and M. Marchiso editors, Torino, 2004.
- [43] Varieties with ample cotangent bundle, *Compos. Math.* **141** (2005), 1445–1459; Erratum **149** (2013), 505–506.
- [44] with G. PACIENZA and M. PĂUN.– Non-deformability of entire curves in projective hypersurfaces of high degree, *Ann. Inst. Fourier* **56** (2006), 247–253.
- [45] On coverings of simple abelian varieties, *Bull. Soc. math. France* **134** (2006), 253–260.
- [46] with C. HACON.– Singularities of divisors on abelian varieties, *Manuscripta Math.* **122** (2007), 217–228.
- [47] with E. IZADI.– Ampleness of intersections of translates of theta divisors in an abelian fourfold, *Proc. Amer. Math. Soc.* **135** (2007), 3477–3483.
- [48] The diagonal property for abelian varieties, *International Conference on Curves and Abelian Varieties, Proceedings, Athens 2007*, 45–50, V. Alexeev, A. Beauville, H. Clemens, and E. Izadi editors, Contemporary Mathematics **465**, A.M.S., 2008.
- [49] with C. VOISIN.– Hyper-Kähler fourfolds and Grassmann geometry, *J. reine angew. Math.* **649** (2010), 63–87.

- [50] with L. EIN, R. LAZARSFELD, and C. VOISIN.– Pseudoeffective and nef classes on abelian varieties, *Compos. Math.* **147** (2011), 1793–1818.
- [51] with A. ILIEV and L. MANIVEL.– On nodal prime Fano threefolds of degree 10, *Sci. China Math.* **54** (2011), 1591–1609.
- [52] with A. ILIEV and L. MANIVEL.– On the period map for prime Fano threefolds of degree 10, *J. Algebraic Geom.* **21** (2012), 21–59.
- [53] with J.A. CHEN and Z. JIANG.– Varieties with vanishing holomorphic Euler characteristic, *J. reine angew. Math.* **21** (2012), 21–59.
- [54] with Z. JIANG and C. VOISIN.– Pseudo-effective classes and pushforwards, *Pure Appl. Math. Q.* **9** (2013), 643–664.
- [55] with A. ILIEV and L. MANIVEL.– Special prime Fano fourfolds of degree 10 and index 2, *Recent Advances in Algebraic Geometry*, 123–155, C. Hacon, M. Mustaţă, and M. Popa editors, London Mathematical Society Lecture Notes Series **417**, Cambridge University Press, 2014.
- [56] with B. LASS.– Monomial transformations of the projective space, *Trends in Contemporary Mathematics*, 97–103, V. Ancona and E. Strickland editors, Springer INdAM Series **8**, Springer, 2014.
- [57] with Z. JIANG and M. LAHOZ, appendix by W. SAWIN.– Rational cohomology tori, *Geom. Topol.* **21** (2017), 1095–1130.
- [58] with A. LAFACE and X. ROULLEAU.– Lines on cubic hypersurfaces over finite fields, in *Geometry over nonclosed fields, 2015*, F. Bogomolov, B. Hassett, and Yu. Tschinkel editors, Simons Symposia, Springer, Cham, 2017.
- [59] with A. KUZNETSOV.– Gushel–Mukai varieties: classification and birationalities, *Algebr. Geom.* **5** (2018), 15–76.
- [60] with A. KUZNETSOV.– Gushel–Mukai varieties: linear spaces and periods, *Kyoto J. Math.* **59** (2019), 897–953.
- [61] with E. MACRÌ.– On the period map for polarized hyperkähler fourfolds, *Int. Math. Res. Not. IMRN* **22** (2019), 6887–6923.
- [62] with F. HAN, K. O’GRADY, C. VOISIN.– Hilbert squares of K3 surfaces and Debarre–Voisin varieties, *J. Éc. polytech. Math.* **7** (2020), 653–710.
- [63] with A. KUZNETSOV.– Double covers of quadratic degeneracy and Lagrangian intersection loci, *Math. Ann.* **378** (2020), 1435–1469.
- [64] with A. KUZNETSOV.– Gushel–Mukai varieties: moduli, *Internat. J. Math.* **31** (2020), 2050013.
- [65] with A. KUZNETSOV.– Gushel–Mukai varieties: intermediate Jacobians, *Épjournal Géom. Algébrique* **4** (2020), <https://epiga.episciences.org/6987>
- [66] with G. MONGARDI.– Gushel–Mukai varieties with many symmetries and an explicit irrational Gushel–Mukai threefold, *Boll. Unione Mat. Ital.* **15** (2022), 133–161.
- [67] with O. BENOIST.– Smooth subvarieties of Jacobians, *Épjournal Géom. Algébrique* (2023), Volume spécial en l’honneur de Claire Voisin, <https://epiga.episciences.org/11456>
- [68] with D. HUYBRECHTS, E. MACRÌ, C. VOISIN.– Computing Riemann–Roch polynomials and classifying hyper-Kähler fourfolds, *J. Amer. Math. Soc.* **37** (2024), 151–185.
- [69] with E. MACRÌ.– Complete curves in the moduli space of polarized K3 surfaces and hyper-Kähler manifolds, to appear in *Perspectives on four decades: Algebraic Geometry 1980 - 2020. In memory of Alberto Collino*, Birkhäuser.