

## Schriftenverzeichnis

Georg Schumacher

1. Über ebene, regulär faktorisierte und einfache holomorphe Abbildungen, *manuscr. math.* **15**, 33–44 (1976)
2. Ein topologisches Reduziertheitskriterium für holomorphe Abbildungen, *Math. Ann.* **220**, 97–103 (1976).
3. Analytische Erweiterungen von Produkträumen, *Math. Z.* **162**, 189–199 (1978) joint with R. Axelsson.
4. Beispiele nicht reduzierter Strukturen auf komplexen Räumen, *Math. Ann.* **238**, 33–38 (1978).
5. Holomorphic maps of generalized Iwasawa manifolds, *manuscripta math.* **30**, 107–117 (1979) joint with A. Huckleberry.
6. Variation der globalen Ext in Deformationen kompakter komplexer Räume, *Math. Ann.* **250**, 135–155 (1980) joint with C. Banica and M. Putinar.
7. Eine Künneth-Formel für die Tangentialkohomologie kompakter komplexer Räume, *Journal f. reine ang. Math.* **321**, 138–149 (1981) joint with R. Axelsson.
8. Deformationen von Keimen eigentlicher, holomorpher Abbildungen, *manuscr. math.* **39**, 39–47 (1982).
9. Eine Künneth-Formel für relative Ext-Garben und deformationstheoretische Anwendungen, *Habilitationsschrift*, Münster, 1981, *Schriftenreihe des math. Inst. Münster*, Heft 29.
10. Deformationen von Faserungen, *Arch. Math.* **41**, 295–307 (1982).
11. Eine Anwendung des Satzes von Calabi-Yau auf Familien kompakter komplexer Mannigfaltigkeiten, *Inventiones math.* **71**, 295–307 (1982).
12. Construction of the coarse moduli space of compact polarized manifolds mit  $c_1 = 0$ , *Math. Ann.* **264**, 81–90 (1983).
13. Moduli of polarized Kähler manifolds, *Math. Ann.* **269**, 137–144 (1984).
14. On the geometry of moduli spaces, *manuscr. math.* **50**, 229–267 (1985).

15. Moduli of polarized Kähler manifolds, Proc. Nancy, 1985.
16. Harmonic maps of the moduli space of compact Riemann surfaces, Math. Ann. **275**, 455–466 (1985).
17. The moduli space of Hermite-Einstein-Bundles on a compact Kähler manifold, Proc. Japan Acad. **63**, Ser **A**, 69–72 (1987) joint with A. Fujiki.
18. The moduli space of Kähler structures on a real compact symplectic manifold, Publ. RIMS, Kyoto, **24**, 141–168 (1988) joint with A. Fujiki.
19. The moduli space of compact extremal Kähler manifolds and generalized Petersson-Weil metrics, Publ. RIMS, Kyoto Univ. **26**, 101–183 (1990) joint with A. Fujiki.
20. Branched coverings and hyperbolicity, Math. Ann. **286**, 537–548 (1990) joint with K. Takegoshi.
21. A geometric algebraicity property for moduli spaces of compact Kähler manifolds mit  $h^{0,2} = 1$ , Math. Z. **204**, 153–155 (1990) joint with F. Campana.
22. The theory of Teichmüller spaces — a view towards moduli spaces of Kähler manifolds, Encyclopedia of Mathematical Sciences, vol. **69**, 251–310 (1990) Barth, W., Narasimhan, R. eds. Russian translation in Itogi Nauki Tekh., Ser. Sovrem. Probl. Mat., Fundam. Napravleniya **69**, 278–345
23. On moduli spaces of Kähler manifolds, the generalized Petersson-Weil Metric and positive line bundles, Rev. Roumaine Pures Appl. **36**, 291–308 (1991)
24. A remark on the automorphisms of the moduli space  $\mathcal{M}_p$  of compact Riemann surfaces, Arch. Math. **59**, 396–397 (1992)(1991)
25. On the Petersson-Weil metric for the moduli space of Hermite-Einstein bundles and its curvature, Math. Ann. **293**, 101–107 (1992) joint with M. Toma.
26. The curvature of the Petersson-Weil metric on the moduli space of Kähler-Einstein manifolds, in "Complex Analysis", Trento 1993 (Plenum Publ.)

27. The curvature of the Petersson-Weil Metric for moduli of Kähler-Einstein Manifolds and Hermite-Einstein bundles, preprint.
28. Moduli of Kähler manifolds equipped with Hermite-Einstein vector bundles, *Rev. Roumaine Math. Pur. Appl.* **28**, 703–719 (Band zum Gedenken an Constantin Banica) joint with M. Toma.
29. On a relative Kobayashi-Hitchin correspondence, *Intl. J. Math.* **4**, 253–288 (1993) joint with M. Lübke and C. Okonek.
30. Hyperbolicity of complements of three quadrics in the projective plane, *Amer. J. Math.* **117** (1995), 573–599 joint with G. Dethloff and P.M. Wong.
31. Über die Entwicklung der Komplexen Analysis in Deutschland, Jahresbericht der Deutschen Mathematiker Vereinigung **98**, 41–133 (1996).
32. On the hyperbolicity of complements of plane curves: The general two and three component cases, *Duke Math. J.* **78** (1995), 193–212 joint with G. Dethloff and P.M. Wong.
33. Asymptotics of Kähler-Einstein metrics on quasi-projective manifolds and an extension theorem on holomorphic maps, *Math. Annalen* **311**, 631–645 (1998).
34. Moduli of framed manifolds, *Inventiones math.* **134**, 229–249 (1998).
35. Asymptotics of Kähler-Einstein Metrics, Negativity of the curvature tensor close to infinity, *Documenta Math.* **7** (2002) 653–658.
36. Non-reduced moduli spaces, *Global Complex Geometry, Proceedings, Hayama 1998*
37. On the diameter of plane curves, *Compositio Math.* **119**, 331–334 (1999) joint with S.T. Feng.
38. A generalized Petersson-Weil metric on the Douady space of embedded manifolds, memorial vol. for M. Schneider 1999 joint with I. Biswas.
39. On a characterization of finite vector bundles as flat vector bundles with finite monodromy group, *Proc. Amer. Math. Soc.* **128** (2000) 3661–3669 joint with I. Biswas and Y. Holla.
40. Determinant bundle, Quillen metric, and Petersson-Weil form on moduli spaces, *GAF, Geometric and Functional Analysis* **9**, 226–256 (1999) joint with I. Biswas.

41. Analytic theory of moduli spaces, Center For Theoretical Sciences: Ntl. Tsing-Hua University, Taiwan 35 p. and Preprint series Fachbereich Mathematik, Universität Marburg 2001.
42. Estimates of Weil-Petersson volumes via effective divisors *Commun. Math. Phys.* **222** (2001) 1, 1–7. joint with S. Trapani.
43. Asymptotics of Kähler-Einstein Metrics - Negativity of the holomorphic sectional curvature close to infinity, *Documenta Math.* **7** (2002) 653–658.
44. Quasi-projectivity of moduli spaces of polarized varieties, *Ann. Math.* **159** (2004) 597–639 joint with H. Tsuji.
45. Variation of cone metrics on Riemann surfaces, *J. Math. Anal. Appl.* **311** (2005) 218–230 joint with St. Trapani.
46. Moduli as algebraic spaces, *Complex analysis in several variables—Memorial Conference of Kiyoshi Oka’s Centennial Birthday*, 283–288, *Adv. Stud. Pure Math.*, **42**, Math. Soc. Japan, Tokyo, 2004.
47. Kähler Geometry of Douady Spaces, *Manuscr. math.* **121** (2006) 277–291 joint with R. Axelsson.
48. On the stability of the tangent bundle of a hypersurface in a Fano variety of Picard number one, *Kyoto Math. J.* **45** (2005) 851–860 joint with I. Biswas.
49. Kähler structure on the moduli spaces of principal G-bundles, *Differential Geometry and its Applications* **25** (2007) 136–146 joint with I. Biswas.
50. Numerically effectiveness and principal bundles on Kähler manifolds, *Ann. Glob. Anal. Geom.* (2008) **34**, 153–165; joint with I. Biswas.
51. Geometry of the moduli space of Higgs bundles, *math.AG/0605589*, *Comm. Analysis Geometry* **14** (2006) 765–793 joint with I. Biswas.
52. Coupled vortex equations and Moduli: Deformation theoretic Approach and Kaehler Geometry; joint with I. Biswas, arXiv:0808.3260. *Math. Ann.* **343** (2009) 825–851.
53. Kähler geometry of moduli spaces, in Catanese, Fabrizio (ed.); Esnault, Hélène. (ed.); Huckleberry, Alan T. (ed.); Hulek, Klaus (ed.); Peternell, Thomas (ed.) *Global aspects of complex geometry*. Berlin: Springer. viii, 506 p. (2006).

54. Yang-Mills equation for stable Higgs sheaves, to appear in Int. Jour. Math; Preprint, arXiv:0803.4435, Int. J. Math. **20**, 541–556 (2009) joint with I. Biswas.
55. Tangent bundle of hypersurfaces in  $G/P$ , J. K-Theory **4**, 91–100 (2009) (form. K-Theory); joint with I. Biswas.
56. Weil-Petersson geometry for families of hyperbolic conical Riemann Surfaces; Mich. J. Math. **60**, 3–33 (2011) arXiv:0809.0058, joint with St. Trapani.
57. Geometric Approach to the Weil-Petersson Symplectic Form, Commentarii Math. Helv. **85**, (2010) 243–257, joint with R. Axelsson. arXiv:0808.3741
58. Positivity of relative canonical bundles of families of canonically polarized manifolds, arXiv:0808.3259 [math.CV] 28. Apr 2009
59. Variation of geodesic length functions over Teichmüller space; joint with Reynir Axelsson. Preprint, arXiv:1006.2966, Ann. Acad. Sci. Fenn. Math. **37**, 91–106 (2012)
60. Vector bundles on Sasakian manifolds, joint with I. Biswas, arXiv: 0809.3892, Adv. Theor. Math. Phys. **14** (2010) 541–561.
61. Multiplier ideal sheaves in algebraic and complex geometry. Abstracts from the workshop held April 12th–April 18th, 2009. Oberwolfach Rep. **6**, 1101–1156 (2009) joint with Kebekus, Stefan (ed.); Paun, Mihai (ed.); Siu, Yum-Tong (ed.)
62. Curvature of  $R^{n-p}f_*\Omega_{X/S}^p(\mathcal{K}_{X/S}^{\otimes m})$  and applications, 30 p., arXiv: 1002.4858
63. Deligne pairing and determinant bundle. Joint with Indranil Biswas, and Lin Weng. Preprint arXiv:1106.0255, ERA Math. Sci. **18**, 91–96 (2011).
64. Positivity of relative canonical bundles and applications, 56 p., Inventiones Math. (“online first”, 13 January 2012) DOI: 10.1007/s00222-012-0374-7. Invent. Math. **190**, 1–56 (2012).
65. Deligne pairing and Quillen metric, preprint. Joint with Indranil Biswas. Int. J. Math. **25** Article ID 1450122, 13 p. (2014).

66. Curvature properties for moduli of canonically polarized manifolds – an analogy to moduli of Calabi-Yau manifolds. *C. R. Acad. Sci. Paris, Ser. I* 352 (2014) 835–840
67. Kähler structure on Hurwitz spaces. Joint with Reynir Axelsson and Indranil Biswas. *Manuscr. Math.* **147**, 63–79 (2015)
68. Curvature of higher direct image sheaves. Joint with Thomas Geiger. In honour of Professor Yujiro Kawamata’s sixtieth birthday, arXiv:1501.07070. *Advanced Studies in Pure Mathematics* **74**, 171–184 (2017). .
69. The Weil-Petersson current for moduli of vector bundles and applications to orbifolds. Joint with Indranil Biswas. arXiv:1509.00304. *Ann. Fac. Sci. Toulouse Math. Vol. XXV*, no 4, 2016 pp. 895-917
70. An extension theorem for Hermitian line bundles. Conf. Hyderabad 2015, to appear 2017. arXiv:1507.06195.
71. Moduli spaces of quiver bundles. Joint with Indranil Biswas. *Journal of Geometry and Physics*, **118** (2017) 51–66.
72. A criterion for a degree-one holomorphic map to be a biholomorphism. Joint with Gautam Bharali, and Indranil Biswas. *Complex Variables and Elliptic Equations* (2017) , DOI: 10.1080/17476933.2016.1252342, arXiv:1610.06286
73. Line bundles and flat connections. Joint with Indranil Biswas. *Proc. Indian Acad. Sci. (Math. Sci.)* (2017) DOI 10.1007/s12044-017-0344-5
74. Positivity of direct images of fiberwise Ricci-flat metrics on Calabi-Yau fibrations. Joint with Matthias Braun, and Young-Jun Choi, subm. arXiv:1508.00323.
75. Line bundles and flat connections. Joint with Indranil Biswas. *Proc. Indian Acad. Sci., Math. Sci.* 127 (2017).
76. Kähler geometry of Douady spaces. Joint with Reynir Axelsson, arXiv:1812.07623, submitted.
77. Restricted volumes and non-Kähler Locus on Moishezon manifolds. Joint with Mihai Paun, prepr.
78.  $L^2$ -Cohomology for Affine Spaces and an Application to Monads. Joint with Nicholas Buchdahl and Pascal Dingoyan. Preprint 18p.

79. Kähler structure of moduli spaces of instantons. Joint with Nicholas Buchdahl. Preprint 26 p.
80. Branched holomorphic Cartan geometry on Sasakian manifolds. Joint with Indranil Biswas and Sorin Dumitrescu, arXiv:1812.02533, submitted.
81. Deformation theory of holomorphic Cartan geometries. Joint with Indranil Biswas and Sorin Dumitrescu, arXiv:1812.05940 submitted.
82. Application of Cheeger-Gromov theory to the  $l^2$ -cohomology of harmonic Higgs bundles over covering of finite volume complete manifolds. Joint with Pascal Dingoyan arXiv:1810.03863, submitted.
83. Symplectic reduction of Sasakian manifolds. Joint with Indranil Biswas. To appear in Proceedings of the Indian Academy of Sciences - Mathematical Sciences. arXiv:1804.03685.
84. Extension of the curvature form of the relative canonical line bundle on families of Calabi-Yau manifolds and applications. Joint with Young-Jun Choi. arXiv:1804.00895, submitted.
85. Kähler geometry of Douady spaces. Joint with Reynir Axelsson, arXiv:1812.07623, submitted.
86. Line bundles and flat connections. Joint with Indranil Biswas. Proc. Indian Acad. Sci., Math. Sci. **127** (2017).
87. Kähler forms for families of Calabi-Yau manifolds. Joint with Matthias Braun, and Young-Jun Choi. To appear in Publications of the Research Institute for Mathematical Sciences (PRIMS), arXiv:1702.07886.
88. Moduli of canonically polarized manifolds, higher order Kodaira-Spencer maps, and an analogy to Calabi-Yau manifolds, arXiv:1702.07628, in Uniformization, Riemann-Hilbert Correspondence, Calabi-Yau Manifolds, and Picard-Fuchs Equations. ALM42 (2018), pp. 371-401.
89. An extension theorem for Hermitian line bundles. Analytic and Algebraic Geometry, 225-237, Hindustan Book Agency, New Delhi, 2017, arXiv:1507.06195.

**Books:**

90. Remmert, Reinhold; Schumacher, Georg: Funktionentheorie. 2., 3rd new revised ed. Springer-Lehrbuch. Berlin: Springer. xvii, 383 p. (2013)
91. Remmert, Reinhold; Schumacher, Georg: Funktionentheorie 1. 5., neu bearb. Aufl. Berlin: Springer. xx, 402 p. (2013)
92. Analytic Theory of Moduli Spaces (in preparation)

January 2019