

Schriftenverzeichnis

Georg Schumacher

1. Über ebene, regulär faktorisierbare 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 $h^{02} = 1$, 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 mit 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, *GAFA, 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 $R^{n-p}f_*\Omega_{\mathcal{X}/S}^p(\mathcal{K}_{\mathcal{X}/S}^{\otimes m})$ 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. Vector bundles on compact complex orbifolds, preprint. Joint with Indranil Biswas.

66. Deligne pairing and Quillen metric, preprint. Joint with Indranil Biswas. *Int. J. Math.* **25** Article ID 1450122, 13 p. (2014).
67. 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
68. Kähler structure on Hurwitz spaces. Joint with Reynir Axelsson and Indranil Biswas. *Manuscripta math.* published online 20. Febr. 2015, DOI: 10.1007/s00229-015-0738-6.
69. Curvature of higher direct image sheaves. Joint with Thomas Geiger. To appear in *Advanced Studies in Pure Mathematics*, arXiv:1501.07070.
70. 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
71. An extension theorem for Hermitian line bundles. *Conf. Hyderabad* 2015, to appear 2017. arXiv:1507.06195.
72. - Moduli spaces of quiver bundles. To appear in *Journal of Geometry and Physics*, Preprint 2016, 19p. Joint with Indranil Biswas.
73. 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
74. Line bundles and flat connections. Joint with Indranil Biswas. *Proc. Indian Acad. Sci. (Math. Sci.)* (2017) DOI 10.1007/s12044-017-0344-5
75. Kähler forms for families of Calabi-Yau manifolds. Joint with Matthias Braun. arXiv:1702.07886
76. Kähler geometry of Douady spaces II. Joint with Reynir Axelsson. Preprint.
77. Restricted volumes and non-Kähler Locus on Moishezon manifolds. Joint with Mihai Paun. In preparation.
78. Kähler structure of moduli spaces of instantons I, II. Joint with Nicholas Buchdahl. Preprints.

Books:

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

April 2017