

Bibliography

- [1] Bär, C., Becker, C.: Differential Characters and Geometric Chains, pp. 1–90. Springer International Publishing, Cham (2014). DOI "10.1007/978-3-319-07034-6_1". URL "https://doi.org/10.1007/978-3-319-07034-6_1"
- [2] Becker, C.: Cheeger–chern–simons theory and differential string classes. *Annales Henri Poincaré* **17**(6), 1529–1594 (2016). DOI 10.1007/s00023-016-0485-6. URL <https://doi.org/10.1007/s00023-016-0485-6>
- [3] Bertlmann, R.A.: Anomalies in quantum field theory. Oxford University Press (1996)
- [4] Biswas, I., López, M.C.: Flat connections and cohomology invariants. *Mathematische Nachrichten* **290**(14-15), 2170–2184 (2017). URL <https://ideas.repec.org/a/bla/mathna/v290y2017i14-15p2170-2184.html>
- [5] Borel, A., Hirzebruch, F.: Characteristic classes and homogeneous spaces, i. *American Journal of Mathematics* **80**(2), 458–538 (1958). URL <http://www.jstor.org/stable/2372795>
- [6] Bott, R., Tu, L.W.: Differential forms in algebraic topology, Graduate Texts in Mathematics, vol. 82. Springer-Verlag, New York-Berlin (1982)
- [7] Brylinski, J.L.: Loop Spaces, Characteristic Classes and Geometric Quantization, Modern Birkhäuser Classics, vol. 107. Birkhäuser Basel (1993). DOI 10.1007/978-0-8176-4731-5

- [8] Bunke, U., Kreck, M., Schick, T.: A geometric description of differential cohomology. *Annales mathématiques Blaise Pascal* **17**(1), 1–16 (2010). DOI 10.5802/ambp.276
- [9] Bunke, U., Schick, T.: Smooth k -theory. In: D. Xianzhe, L. Rémi, X. Ma, Z. Weiping (eds.) *From probability to geometry (II) - Volume in honor of the 60th birthday of Jean-Michel Bismut*, no. 328 in *Astérisque*, pp. 45–135. Société mathématique de France (2009). URL http://www.numdam.org/item/AST_2009__328__45_0
- [10] Bunke, U., Schick, T.: Uniqueness of smooth extensions of generalized cohomology theories. *Journal of Topology* **3**(1), 110–156 (2010). DOI 10.1112/jtopol/jtq002. URL <https://londmathsoc.onlinelibrary.wiley.com/doi/abs/10.1112/jtopol/jtq002>
- [11] Bunke, U., Schick, T.: Differential k -theory: A survey. In: C. Bär, J. Lohkamp, M. Schwarz (eds.) *Global Differential Geometry*, pp. 303–357. Springer Berlin Heidelberg, Berlin, Heidelberg (2012)
- [12] Carey, A.L., Mickelsson, J., Wang, B.L.: Differential twisted K-theory and applications. *Journal of Geometry and Physics* **59**(5), 632 – 653 (2009). DOI <https://doi.org/10.1016/j.geomphys.2009.02.002>. URL <http://www.sciencedirect.com/science/article/pii/S0393044009000175>
- [13] Castrillón López, M., Ferreiro Pérez, R.: Differential characters and cohomology of the moduli of flat connections. *Letters in Mathematical Physics* (2018). DOI 10.1007/s11005-018-1095-7. URL <https://doi.org/10.1007/s11005-018-1095-7>
- [14] Cheeger, J., Simons, J.: Differential characters and geometric invariants. In: *Geometry and Topology*, pp. 50–80. Springer Berlin Heidelberg, Berlin, Heidelberg (1985)

- [15] Chern, S.S.: On the characteristic classes of complex sphere bundles and algebraic varieties. *American Journal of Mathematics* **75**(3), 565–597 (1953). URL <http://www.jstor.org/stable/2372505>
- [16] Chern, S.S., Simons, J.: Characteristic forms and geometric invariants. *Ann. of Math. (2)* **99**, 48–69 (1974). DOI 10.2307/1971013. URL <https://doi.org/10.2307/1971013>
- [17] Dijkgraaf, R., Witten, E.: Topological gauge theories and group cohomology. *Communications in Mathematical Physics* **129**(2), 393–429 (1990). DOI 10.1007/bf02096988. URL <https://doi.org/10.1007/bf02096988>
- [18] Dupont, J.L., Kamber, F.W.: Gerbes, simplicial forms and invariants for families of foliated bundles. *Communications in Mathematical Physics* **253**(2), 253–282 (2005). DOI 10.1007/s00220-004-1193-5. URL <https://doi.org/10.1007/s00220-004-1193-5>
- [19] Dupont, J.L., Ljungmann, R.: Integration of simplicial forms and deligne cohomology. *MATHEMATICA SCANDINAVICA* **97**(1), 11–39 (2005). DOI 10.7146/math.scand.a-14961. URL <https://www.mscaand.dk/article/view/14961>
- [20] Ewald, C.: Hochschild homology, and de rham cohomology of stratifolds. Ph.D. thesis, Universität Heidelberg (2002)
- [21] Ewald, C.: A de rham isomorphism in singular cohomology and stokes theorem for stratifolds. *International Journal of Geometric Methods in Modern Physics* **2**(1) (2005)
- [22] Fiorenza, D., Sati, H., Schreiber, U.: A higher stacky perspective on chern–simons theory. *Mathematical Aspects of Quantum Field Theories* p. 153–211 (2015). DOI 10.1007/978-3-319-09949-1_6. URL http://dx.doi.org/10.1007/978-3-319-09949-1_6

- [23] Fiorenza, D., Sati, H., Schreiber, U.: The wess-zumino-witten term of the m5-brane and differential cohomotopy. *Journal of Mathematical Physics* **56**(10), 102301 (2015). DOI 10.1063/1.4932618. URL <http://dx.doi.org/10.1063/1.4932618>
- [24] Freed, D.S.: Classical chern-simons theory. ii. *Houston J. Math.* **28**(2), 293–310 (2002)
- [25] Freed, D.S.: Dirac charge quantization and generalized differential cohomology. *Surveys in Differential Geometry* **7**(1), 129–194 (2002). DOI 10.4310/sdg.2002.v7.n1.a6. URL <https://doi.org/10.4310/sdg.2002.v7.n1.a6>
- [26] Freed, D.S., Hopkins, M.: On ramond-ramond fields and k-theory. *Journal of High Energy Physics* **2000**(05), 044–044 (2000). DOI 10.1088/1126-6708/2000/05/044. URL <https://doi.org/10.1088/1126-6708/2000/05/044>
- [27] Gajer, P.: Geometry of deligne cohomology. *Inventiones mathematicae* **127**(1), 155–207 (1997). DOI 10.1007/s002220050118. URL <https://doi.org/10.1007/s002220050118>
- [28] Gomi, K., Terashima, Y.: A fiber integration formula for the smooth deligne cohomology. *International Mathematics Research Notices* **2000**(13), 699–708 (2000). DOI 10.1155/S1073792800000386. URL <http://dx.doi.org/10.1155/S1073792800000386>
- [29] Grady, D., Sati, H.: Ramond-Ramond fields and twisted differential K-theory (2019)
- [30] Guruprasad, K., Kumar, S.: A new geometric invariant associated to the space of flat connections. *Compositio Math.* **73**(2), 199–222 (1990). URL http://www.numdam.org/item?id=CM_1990__73_2_199_0
- [31] Harvey, R., Lawson, B.: From sparks to grundles — differential characters. *Communications in Analysis and Geometry* **14**(1), 25–58 (2006). DOI 10.

- 4310/CAG.2006.v14.n1.a2. URL <https://dx.doi.org/10.4310/CAG.2006.v14.n1.a2>
- [32] Harvey, R., Lawson, B., Zwick, J.: The de Rham-Federer theory of differential characters and character duality. *American Journal of Mathematics* **125**(4), 791–847 (2003). DOI 10.1353/ajm.2003.0025. URL <http://doi.org/10.1353/ajm.2003.0025>
- [33] Hopkins, M., Singer, I.: Quadratic functions in geometry, topology, and m-theory. *J. Differential Geom.* **70**(3), 329–452 (2005). DOI 10.4310/jdg/1143642908. URL <https://doi.org/10.4310/jdg/1143642908>
- [34] Iyer, J.N.N.: Cohomological invariants of a variation of flat connections. *Letters in Mathematical Physics* **106**(1), 131–146 (2016). DOI 10.1007/s11005-015-0807-5. URL <https://doi.org/10.1007/s11005-015-0807-5>
- [35] Kreck, M.: Differential algebraic topology, *Graduate Studies in Mathematics*, vol. 110. American Mathematical Society, Providence, RI (2010). DOI 10.1090/gsm/110. URL <https://doi.org/10.1090/gsm/110>. From stratifolds to exotic spheres
- [36] Kübel, A., Thom, A.: Equivariant differential cohomology. *Trans. Amer. Math. Soc.* **370**, 8237–8283 (2018). DOI 10.1090/tran/7315. URL <https://doi.org/10.1090/tran/7315>
- [37] Ljungmann, R.: Secondary invariants for families of bundles. Ph.D. thesis (2006)
- [38] Meier, L.: A geometric view on string topology, diploma thesis, (2009)
- [39] Narasimhan, M.S., Ramanan, S.: Existence of universal connections. *American Journal of Mathematics* **83**(3), 563–572 (1961). URL <http://www.jstor.org/stable/2372896>

- [40] Park, B.: Geometric models of twisted differential K-theory I. *Journal of Homotopy and Related Structures* **13**(1), 143–167 (2017). DOI 10.1007/s40062-017-0177-z. URL <https://doi.org/10.1007/s40062-017-0177-z>
- [41] Pawar, R.: A generalization of grothendieck’s extension panachées. *Proc Math Sci* **129** (2019). DOI 10.1007/s12044-019-0523-7. URL <https://doi.org/10.1007/s12044-019-0523-7>
- [42] Redden, C.: Differential Borel equivariant cohomology via connections. *New York J. Math.* **23**, 441–487 (2017). URL <http://nyjm.albany.edu/j/2017/23-20.html>
- [43] Rotman, J.: *An Introduction to Homological Algebra*, 2 edn. Universitext. Springer-Verlag, New York (2009). DOI 10.1007/b98977. URL <https://www.springer.com/gp/book/9780387245270>
- [44] Schreiber, U.: *Differential cohomology in a cohesive infinity-topos* (2013)
- [45] Simons, J., Sullivan, D.: Axiomatic characterization of ordinary differential cohomology. *Journal of Topology* **1**(1), 1–23. DOI 10.1112/jtopol/jtm006. URL <https://doi.org/10.1112/jtopol/jtm006>
- [46] Simons, J., Sullivan, D.: Structured bundles define differential K-theory pp. 1–12. URL <https://arxiv.org/abs/0810.4935>
- [47] Simons, J., Sullivan, D.: The mayer-vietoris property in differential cohomology (2010)
- [48] Weibel, C.A.: *An Introduction to Homological Algebra* (1994). DOI 10.1017/CBO9781139644136. URL <https://doi.org/10.1017/CBO9781139644136>. URL [/core/books/an-introduction-to-homological-algebra/AAA3F16482097015CD12D4376D505282](https://www.cambridge.org/core/books/an-introduction-to-homological-algebra/AAA3F16482097015CD12D4376D505282)

- [49] Witten, E.: Quantum field theory and the jones polynomial. *Communications in Mathematical Physics* **121**(3), 351–399 (1989). DOI 10.1007/bf01217730. URL <https://doi.org/10.1007/bf01217730>