HIGHER CATEGORIES AND CATEGORIFICATION
MSRI
January 21 to May 29, 2020

[1] J. E. BERGNER, *The homotopy theory of* $(\infty, 1)$-*categories*, London Mathematical Society Student Texts **90**, Cambridge University Press, Cambridge, 2018, ISBN 978-1-107-49902-7; 978-1-107-10136-4. MR 3791455. Zbl 1396.18001. doi: 10.1017/9781316181874.

[2] D.-C. CISINSKI, *Higher categories and homotopical algebra*, Cambridge Studies in Advanced Mathematics **180**, Cambridge University Press, Cambridge, 2019, ISBN 978-1-108-47320-0. MR 3931682. Zbl 07002779. doi: 10.1017/9781108588737.

[3] K. COSTELLO and O. GWILLIAM, *Factorization algebras in quantum field theory, Vol. 1*, New Mathematical Monographs **31**, Cambridge University Press, Cambridge, 2017, ISBN 978-1-107-16310-2. MR 3586504. Zbl 1377.81004. doi: 10.1017/9781316678626.

[4] B. FRESSE, *Homotopy of operads and Grothendieck–Teichmüller groups, 1: The algebraic theory and its topological background*, Mathematical Surveys and Monographs **217**:1, American Mathematical Society, Providence, RI, 2017, ISBN 978-1-4704-3481-6. MR 3643404. Zbl 1373.55014. doi: 10.1090/surv/217.1.

[5] B. FRESSE, *Homotopy of operads and Grothendieck–Teichmüller groups, 2: The applications of (rational) homotopy theory methods*, Mathematical Surveys and Monographs **217**:2, American Mathematical Society, Providence, RI, 2017, ISBN 978-1-4704-3482-3. MR 3616816. Zbl 1375.55007. doi: 10.1090/surv/217.2.

[6] D. GAITSGORY and N. ROZENBLYUM, *A study in derived algebraic geometry, I: Correspondences and duality*, Mathematical Surveys and Monographs **221**:1, American Mathematical Society, Providence, RI, 2017, ISBN 978-1-4704-3569-1. MR 3701352. Zbl 1408.14001. doi: 10.1090/surv/221.1.

[7] D. GAITSGORY and N. ROZENBLYUM, *A study in derived algebraic geometry, II: Deformations, Lie theory and formal geometry*, Mathematical Surveys and Monographs **221**:2, American Mathematical Society, Providence, RI, 2017, ISBN 978-1-4704-3570-7. MR 3701353. Zbl 1409.14003. doi: 10.1090/surv/221.2.

[8] P. HACKNEY, M. ROBERTSON, and D. YAU, *Infinity properads and infinity wheeled properads*, Lecture Notes in Mathematics **2147**, Springer, Cham, 2015, ISBN 978-3-319-20546-5; 978-3-319-20547-2. MR 3408444. Zbl 1338.18002. doi: 10.1007/978-3-319-20547-2.

[9] J. LURIE, *Higher topos theory*, Annals of Mathematics Studies **170**, Princeton University Press, Princeton, NJ, 2009, ISBN 978-0-691-14049-0; 0-691-14049-9. MR 2522659. Zbl 1175.18001. doi: 10.1515/9781400830558.

[10] H. MILLER (ed.), *Handbook of homotopy theory*, Handbooks in Mathematics Series, Chapman and Hall/CRC Press, Boca Raton, FL, 2019, ISBN 978-0-8153-6970-7. Zbl 07128197.

[11] S. PAOLI, *Simplicial methods for higher categories: Segal-type models of weak n-categories*, Algebra and Applications **26**, Springer, Cham, 2019, ISBN 978-3-030-05673-5; 978-3-030-05674-2. MR 3932125. Zbl 07029566. doi: 10.1007/978-3-030-05674-2.

[12] C. SIMPSON, *Homotopy theory of higher categories: from Segal categories to n-categories and beyond*, New Mathematical Monographs **19**, Cambridge University Press, Cambridge, 2012, ISBN 978-0-521-51695-2. MR 2883823. Zbl 1232.18001. doi: 10.1017/CBO9780511978111.

[13] V. G. TURAEV, *Homotopy quantum field theory*, EMS Tracts in Mathematics **10**, European Mathematical Society, Zürich, 2010, ISBN 978-3-03719-086-9. MR 2674592. Zbl 1243.81016. doi: 10.4171/086.

[14] V. G. TURAEV, *Quantum invariants of knots and 3-manifolds*, 3rd ed., De Gruyter Studies in Mathematics **18**, De Gruyter, Berlin, 2016, ISBN 978-3-11-044266-3; 978-3-11-043522-1; 978-3-11-043456-9. MR 3617439. Zbl 1346.57002. doi: 10.1515/9783110435221.