This is a collection of references for the online lecture series *"Modular Forms in String Compactifications"* that i held 22.2.-26.2.2021 for the Bethe Center for Theoretical Physics. The list is intended to be an entry point for further studies and does not aim to include all of the relevant original papers. References to the latter can be found in the reviews below.

1 Day 1: Introduction

1.1 Morning session

- Introductions to modular forms: [1–3]

1.2 Afternoon session

- Introductions to string compactifications: [4, 5]

2 Day 2: Type II Strings on Tori

- Homological mirror symmetry on tori: [6, 7]
- Modular forms as sections of line bundles: [8]

3 Day 3: Strings on torus fibered Calabi-Yau threefolds

4 Day 4: F-theory and elliptic genera

5 Day 5: Jacobi forms and the Swampland

References

[1] K. Ranestad, J. Bruinier, G. van der Geer, G. Harder, and D. Zagier, *The 1-2-3 of Modular Forms: Lectures at a Summer School in Nordfjordeid, Norway*. Universitext. Springer Berlin Heidelberg, 2008.

[2] N. Koblitz, *Introduction to Elliptic Curves and Modular Forms*. Graduate texts in mathematics. New York, 1984.

[3] W. Stein, *Modular Forms, a Computational Approach*. Graduate Studies in Mathematics. AMS, 2007. `https://wstein.org/books/modform/modform/`.

[4] A. Font and S. Theisen, "Introduction to string compactification," *Lect. Notes Phys.* **668** (2005) 101–181.

[5] B. R. Greene, "String theory on Calabi-Yau manifolds," in *Theoretical Advanced Study Institute in Elementary Particle Physics (TASI 96): Fields, Strings, and Duality*, pp. 543–726. 6, 1996. `arXiv:hep-th/9702155`.

[6] A. Polishchuk and E. Zaslow, "Categorical mirror symmetry: The Elliptic curve," *Adv. Theor. Math. Phys.* **2** (1998) 443–470, `arXiv:math/9801119`.

[7] A. Port, "An Introduction to Homological Mirror Symmetry and the Case of Elliptic Curves," *arXiv e-prints* (Jan., 2015) arXiv:1501.00730, `arXiv:1501.00730 [math.SG]`.

[8] J. S. Milne, "Modular functions and modular forms (v1.31)," 2017. Available at www.jmilne.org/math/.