

References for the course “Higgs bundles and related topics”

Qionglng Li

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Prerequisite on Riemann surfaces:

0. Otto Foster, Lectures on Riemann surfaces, GTM, volume 81.
<https://link.springer.com/book/10.1007/978-1-4612-5961-9>

Lecture 1-2:

1. William M. Goldman, Eugene Z. Xia, Rank One Higgs Bundles and Representations of Fundamental Groups of Riemann Surfaces, Memoirs of the American Mathematical Society, 2008.

Lecture 3-:

2. Andy Neizke’s lecture notes for course “moduli space of Higgs bundles”
<https://gauss.math.yale.edu/an592/exports/higgs-bundles.pdf>
3. Richard Wentworth, Higgs bundles and local systems on Riemann surfaces,
<https://arxiv.org/abs/1402.4203>
4. Jan Swoboda, Moduli Spaces of Higgs Bundles – Old and New, Jahresber. Dtsch. Math. Ver. 123, 65–130 (2021).
<https://link.springer.com/article/10.1365/s13291-021-00229-1>
5. Nigel Hitchin, The Self-Duality Equations on a Riemann Surface, Proc. LMS.
<https://londmathsoc.onlinelibrary.wiley.com/doi/epdf/10.1112/plms/s3-55.1.59>
6. Carlos Simpson, Higgs bundles and local systems, Publications mathématiques de l’I.H.É.S., tome 75 (1992), p. 5-95.
<https://link.springer.com/article/10.1007/BF02699491>