

Advanced 2d CFT reading group schedule

June 18, 2018

Week 1 : 2d CFT basics

Meeting: Friday May 4th at 2pm in room 326 for discussion and Monday May 7th at 10:30 in room 326 for problems

Readings: Blumenhagen chapter 2

Problems: 5.1 (if you never did it), 5.2, 5.3, 5.6, 5.7 and 5.9 from di Francesco

Week 2 : Extended symmetry algebras

Meeting: Friday May 11th at 2pm in the boardroom

Readings: Blumenhagen chapter 3

Problems: 6.4, 6.5 and 6.8 from di Francesco

Week 3 : Modular invariance (part 1)

Meeting: Friday May 18th at 2pm in room 326

Readings: Blumenhagen chapter 4

Problems: 6.10 and 6.12 from di Francesco

Week 4 : Modular invariance (part 2)

Meeting: Friday May 25th at 2pm in room 326

Readings: Blumenhagen chapter 4

Problems: 6.10 and 6.12 from di Francesco

Week 5 : 2d CFTs with SUSY

Meeting: Friday June 1st at noon in room 326

Readings: Blumenhagen chapter 5

Problems: 7.1, 7.3, 7.5, 7.7 and 7.11 from di Francesco

Week 6 : Boundary CFTs

Meeting: Friday June 8th at 2pm in room 326

Readings: Blumenhagen chapter 6

Problems: 15.1, 15.6, 15.8, 15.9, 15.17 from di Francesco

Week 7 : Virasoro blocks

Meeting: Friday June 15th at 10:30 in room 326

Readings: Appendices B, C and D of 1403.6829

Problems: 11.1, 11.2 and 11.6 from di Francesco

Week 8 : Liouville theory

Meeting: Friday June 22nd at 10:30 in room 326

Readings: Section 3 of 9304011

Problems: Problems in the lectures

Week 9 : Universality at large c

Meeting: Friday June 29th at 10:30 in room 326

Readings: All of 1405.5137

Problems: none

Week 10 : Large spin bootstrap

Meeting: Friday July 6th at 10:30 in room 326

Readings: All of 1212.3616

Problems: none

Possible topics

- Liouville theory
- Virasoro blocks
- Modular bootstrap
- 2d Yang-Mills
- c theorem
- Sparse spectrum paper
- Witten's paper