

ICTS String Seminar

- Title : Finite-cutoff JT gravity and self-avoiding loops
- Speaker : Zhenbin Yang (Stanford University)
- Date : Wednesday, June 10, 2020
- Time : 09:00 am
- Abstract : We study quantum JT gravity at finite cutoff using a mapping to the statistical mechanics of a self-avoiding loop in hyperbolic space, with positive pressure and fixed length. The semiclassical limit (small G_N) corresponds to large pressure, and we solve the problem in that limit in three overlapping regimes that apply for different loop sizes. For intermediate loop sizes, a semiclassical effective description is valid, but for very large or very small loops, fluctuations dominate. For large loops, this quantum regime is controlled by the Schwarzian theory. For small loops, the effective description fails altogether, but the problem is controlled using a conjecture from the theory of self-avoiding walks.
- ICTS virtual seminar : Please register at
<https://docs.google.com/forms/d/e/1FAIpQLSf0jLgoqiOgDnxbEBGiuIWiOmh9WX8caH-pr13qDBZOO91lmg/viewform>
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Recordings of past talks can be found here:

<https://www.youtube.com/channel/UCw9LdPQ5t7Q7muD0qzn70TA>