

ICTS String Seminar

- Title : Surface Defects from Fractional Branes
- Speaker : Sujay Ashok (Institute of Mathematical Sciences, Chennai)
- Date : Wednesday, 16 September 2020
- Time : 03:00 pm (IST)
- Abstract : We show that the Gukov-Witten defects of supersymmetric Yang-Mills theory can be realized in perturbative string theory. This is done by considering an orbifold background of the Kanno-Tachikawa type and placing stacks of fractional D3-branes whose world-volume partially extends along the orbifold directions. In particular, we show that turning on a constant background value for some scalar fields in the closed string twisted sectors induces a non-trivial profile for the gauge field and one of the complex scalars of the world-volume theory. This profile exactly matches the singular behavior that one expects for a Gukov-Witten surface defect in the $N=4$ supersymmetric gauge theory.

[ICTS virtual seminar](#) : Please register at
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(Links to join the seminars will be sent to your registered email address)

Recordings of past talks can be found here:

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