

Null Open Strings and Boundary Conformal CFTs

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We study null open strings and establish, for the first time, that the worldsheet residual gauge symmetry algebra is the Boundary Carrollian Conformal Algebra (BCCA). We present the construction of open null strings and demonstrate that, under Dirichlet boundary conditions, Boundary Carrollian Conformal Algebra emerges as the algebra of constraints. Additionally, we show that the BCCA can be obtained by contracting a single copy of the Virasoro algebra, confirming that null open strings arise as the tensionless limit of tensile open strings. This discovery initiates a broader study of Carrollian Conformal Field Theory (CCFT) with boundaries, opening a range of new research possibilities, given the growing importance of Carrollian symmetries.

Author: Dr PANDIT, Priyadarshini (Indian Institute of Technology Kanpur)

Co-authors: Prof. BAGCHI, Arjun (Indian Institute of Technology Kanpur); GRUMILLER, Daniel (Institute for Theoretical Physics, TU Wien); CHAKRABORTY, Pronoy (Indian Institute of Technology Ropar); CHAKRABORTTY, Shankhadeep; FREDENHAGEN, Stefan (University of Vienna)

Presenter: Dr PANDIT, Priyadarshini (Indian Institute of Technology Kanpur)

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