

Inspired by recent developments of gauge theory in connection with twistor string theory, in this article the authors apply a particular recursion technique, the so-called BCFW recursion rule [1], to calculations of various string amplitudes. It is shown that open string disc amplitudes satisfy the BCFW rule up to a certain kinematic constraint. A similar result is also obtained for closed string amplitudes. The article also suggests various CFT-based approaches to further understand string theory and, presumably, string field theory.

Motivation of this study is understandable but its approach seems to be rather naive, at least for the reviewer. At the end of this paper the authors state, "After all string theory should be an upgrade of field theory, not a downgrade." This perception may be shared by many string theorists but, as well-known, the AdS/CFT correspondence connects string theory to a certain region of gauge theory. Moreover, the very developments of gauge theory in spinor-helicity formalism are revealing the importance of new concepts such as dual superconformal symmetry, Yangian symmetry and Hecke algebra. This article is therefore a good reading for those who are interested in developments of string theory *per se* but may not be suitable for the others.

References

- [1] R. Britto, F. Cachazo, B. Feng and E. Witten, Phys. Rev. Lett. **94**, 181602 (2005) [hep-th/0501052].