

## List of Publication

### I. Papers published/accepted for publication in journals

1. Nath, N. M., Das, M. K. and Sarma, J. K.  $Q^2$  evolution of  $xF_3(x, Q^2)$  structure function and Gross Llewellyn-Smith sum rule up to next-next-to-leading order at low- $x$  and low- $Q^2$  using a  $Q^2$  dependent Regge ansatz, *Indian J. Phys.* (Accepted for publication)
2. Nath, N. M., Das, M. K. and Sarma, J. K. Regge-like initial input and evolution of non-singlet structure functions from DGLAP equation up to next-next-to-leading order at low- $x$  and low- $Q^2$ , *Pramana J. Phys.*, 2014.(DOI: 10.1007/s12043-014-0902-7)
3. Nath, N. M., Das, M. K. and Sarma, J. K. Regge Inspired QCD Based Investigation on the  $Q^2$  Dependence of Gross-Llewellyn Smith Sum Rule Up to NNLO QCD Corrections, *J. Adv. Phys.* **4**(2), 1-7, 2015.
4. Nath, N. M. & Sarma, J. K. Usefulness of Regge theory in the evolution of non-singlet structure functions from DGLAP equations upto NNLO at small- $x$ , *Int. J. App. Math. Eng. Sc.* 2014 (Accepted for publication)
5. Nath, N. M., Baruah, N. & Sarma, J. K. Analytical solution of DokshitzerGribovLipatovAltarelliParisi evolution equation for  $xF_3(x, Q^2)$  structure functions at low- $x$  and low- $Q^2$ , using a  $Q^2$  dependent Regge ansatz *Indian J. Phys.*, **88**(7), 745-749, 2014.
6. Nath, N. M., Das, M. K. and Sarma, J. K. Solution of DGLAP Evolution Equation for  $xF_3$  Structure Function in Leading and Next-to-Leading Order at Small- $x$ , *Univ. J. Phys. App.* **2**(2) 80-84, 2014.
7. Nath, N. M., Baruah, N. & Sarma, J. K. Neutrino-Nucleon scattering and  $xF_3(x, Q^2)$  structure function from leading order DGLAP evolution equation at small- $x$ , *JASS* **52**(1), 68-74, 2011.

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## **II. Papers under review in referred journals/in preparation**

1. Nath, N. M. & Sarma, J. K. Small- $x$  behavior of non-singlet spin structure function and Bjorken sum rule, Euro. Phys. J. C (Under review)
2. Nath, N. M. & Sarma, J. K. Extraction of higher twist effect in non-singlet structure functions and associated sum rules(Under review)
3. Nath, N. M., Mukharjee, A. & Sarma, J. K. Nuclear effects in non-singlet structure functions and associated sum rules(in preparation)
4. Nath, N. M. & Sarma, J. K. Perturbative and non-perturbative effects in non-singlet structure functions: a phenomenological analysis(in preparation)

## **III. Books and Book Chapters**

1. Nath, N. M. & Sarma, J. K. Semi analytical solution of DGLAP evolution equation up to next-to-leading order for non-singlet spin structure function using a  $Q^2$  dependent Regge ansatz, *Recent Trends of Mathematics and its applications*, EBH publishers, Guwahati, 2014.
2. Nath, N. M. *Our current views on nature's building blocks*, Ticol printers and Publishers, Tezpur, 2015.(In press)