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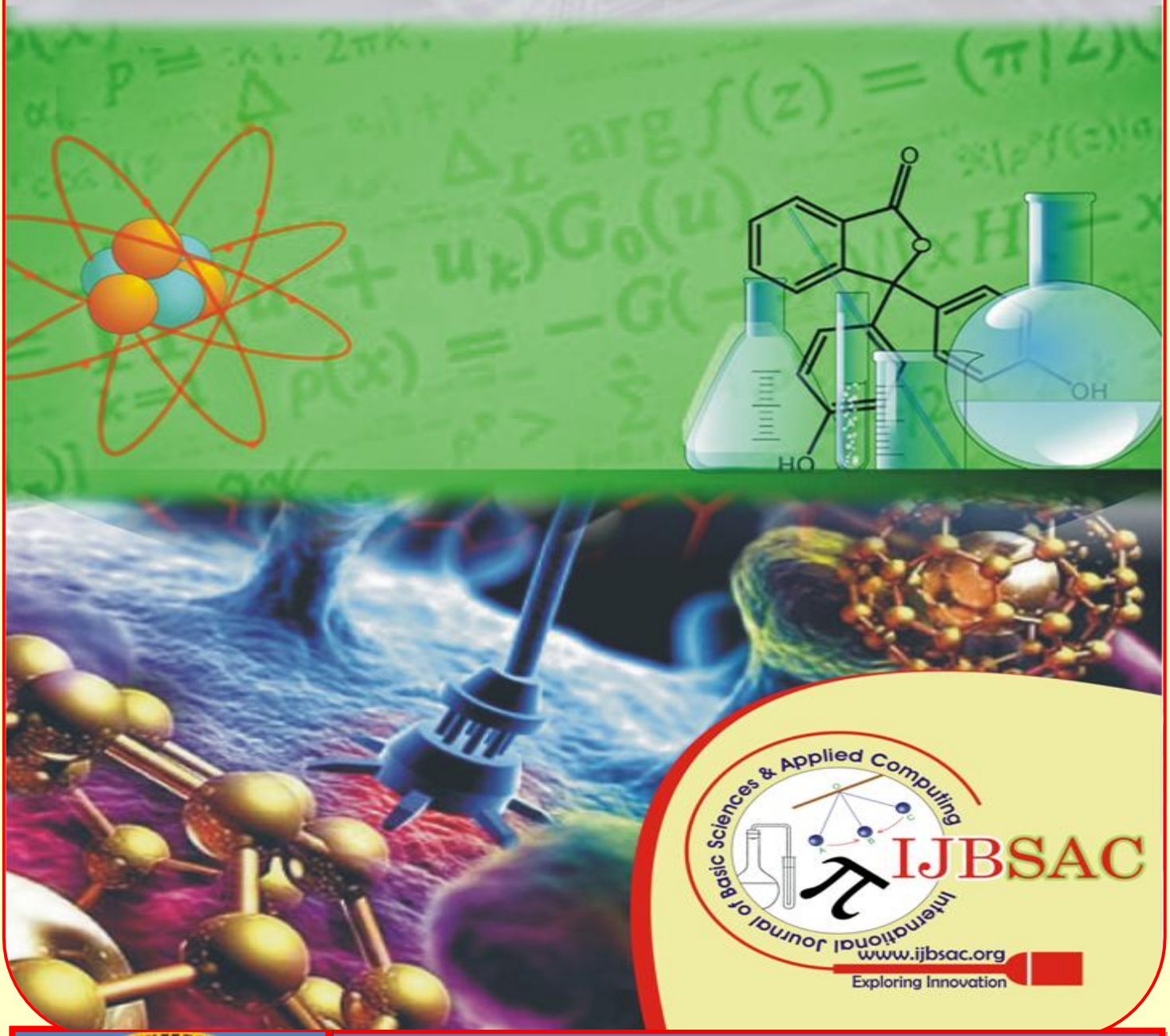

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1.

Authors: Rohit Roy, S. P. Syed Ibrahim

Paper Title: An Approach in Big Data Analytics Framework for Analysing Huge Gene Transcription Data

Abstract: Gene Co-expression network analysis is increasingly used to explore system level functionality. In order to study the complexity within gene interactions and identify a target gene for clinical application the researchers apply co expression network based on correlation coefficient. Significance of weighted co expression network analysis is that it reduces the high dimension of the data and integrity of multi scale dataset and also identifies the hidden interactions among the genes. Construction of co expression network on a large sample size would improve the accuracy and robustness but statistical and computational methods applied for screening of multidimensional data are both space and time consuming. In present, the researchers are at the verge of acquiring a new methodology that analyzes huge data in short time period. However big data analytics method for analyzing gene co expression network is in infant stage. Our objective is to identify an approach using big data analytics framework that can enable scientific research community to process large scale data and support them in identifying clinically significant targets.

Keywords: Co-Expression, Correlation, Weighted Network, Network Analysis.

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2.

Authors: M. Thiagarajan, M. Dinesh Kumar

Paper Title: Heat Source/Sink and Chemical Reaction Effects on MHD and Heat Transfer Flow of Radiative Nanofluid Over a Porous Exponentially Stretching Sheet with Viscous Dissipation and Ohmic Heating

Abstract: This paper presents an investigation of the hydromagnetic boundary layer flow of a nanofluid and heat transfer past a porous exponentially stretching sheet with effects of heat generation/absorption and Ohmic heating. The impact of Brownian motion and thermophoresis on heat transfer, thermal radiation, chemical reaction and viscous dissipation are also considered. Nonlinear partial differential equations governing the motion are reduced to ordinary differential equations by using similarity transformations. These equations are solved numerically using the Nachtsheim-Swigert shooting technique scheme together with Fourth-order Runge-Kutta integration method, for different values of flow parameter such as magnetic interaction parameter, porosity parameter, Brownian motion, thermophoresis parameter, Eckert number, heat source/sink parameter, Lewis number, chemical reaction parameter, and suction parameter. Quantities of physical interest such as skin-friction coefficient, non-dimensional rate of heat and mass transfer are solved numerically and are tabulated. Comparisons with previously study are performed and are found to be in a good agreement.

Keywords: Exponentially Stretching Sheet, Heat Source/Sink, Joules Dissipation, MHD, Nanofluid, Thermal Radiation.

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3.

Authors: **Parcha Kalyani, Mihretu Nigatu Lemma, Dejene Bekele Feyisa**

Paper Title: **Spline Solution of Linear Seventh Order Boundary Value Problems using Tenth Degree Functions and Comparison with Different Degrees of Spline Solutions**

Abstract: In this communication numerical solutions of general linear boundary value problems of order seven are considered. Tenth degree spline approximations are developed following Cubic Spline Bickley's procedure and applied. Approximate numerical solutions are computed at different step lengths, and also absolute errors are calculated. The results are tabulated and pictorially illustrated. Further, the results of the tenth degree spline function solutions are compared with eighth and ninth degree spline solutions.

Keywords: Spline approximations; seventh order boundary value problems; tenth degree spline; numerical results.

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