

HOME ABOUT	SUBMIT PAPER REGI	STER CURRENT	ARCHIVES SPEC	CIAL ISSUE	ONLINE ARTICLES	
SUBMISSION GUIDELINES	ANNOUNCEMENTS	EDITORIAL TEAM	EDITORIAL POLICY	INTERNAT	IONAL ADVISORY BOARD	
		CONTACT SE	ARCH			
			Search			

Home / Archives / Vol 10 No 1A (2022): Journal of Engineering Research / Chemical Engineering

## A computationally efficient technique for solution of pulp washing models

#### Satinder Pal Kaur

Research Scholar, MRS PTU, Bathinda, Punjab

#### Dr. Ajay Mittal

Aryabhatta Group of Institutes, Barnala, Punjab, India

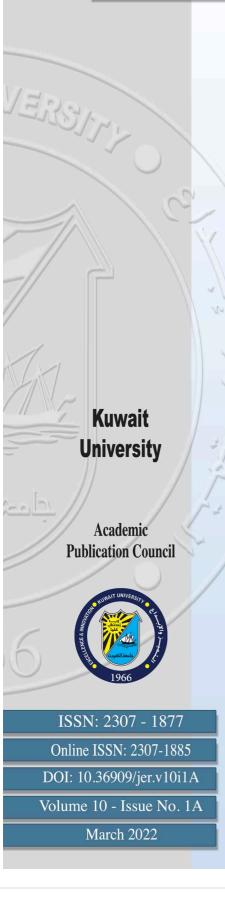
DOI: https://doi.org/10.36909/jer.10825

### Abstract

An efficient numerical technique for the solution of mathematical model related to pulp washing is described along with the effect of various ind ustrial parameters. The linear and non-linear models are solved using Quintic Hermite Collocation Method with Dirichlet's and mixed Robin's bou ndary conditions. Results are obtained by using MATLAB ode15s and are compared with analytic ones and other numerical techniques proposed by various researchers. The method is found to be stable by using the stability analysis and convergence criteria. The present method is more con venient, simple and refined for solving the two-point boundary value problems and the results are more robust than earlier techniques.

# Journal of Engineering Research

A Refereed Journal, Published by the Academic Publication Council - Kuwait University



Architectural building design with refurbished shipping containers: A typological and modular approach
Luiz António Pereira-de-Oliveira, Luís Filipe Almeida Bernardo and Ana Raquel Araújo Marques
BIM-based facility management models for existing buildings
Karim Soliman, Khalid Naji, Murat Gunduz, Onur B. Tokdemir, Faisal Faqih and Tarek Zayed
Reevaluation of the Egyptian code of housing and energy consumption with emphasis on shading devices
rotation angles
Tarek M.Kamel
An architectural analytical study of contemporary minaret design in Kuwait
Mohammed Alajmi and Yousef Al-Haroun
A computationally efficient technique for the solution of pulp washing models
Satinder Pal Kaur and Dr. Ajay Kumar Mittal
Optimization of transesterification process and characterization of biodiesel from soapstock using silica
sulfuric acid as a heterogeneous solid acid catalyst
Samuel Latebo, Abreham Bekele, Temesgen Abeto and Job Kasule
Nonisothermal models to determine the rheological constants of different Kuwaiti crude oils
Bader Albusairi and Adam Al-Mulla
A hybrid digital image watermarking scheme incorporating DWT, DFT, DCT, and SVD transformations
Justin Varghese, T Abdul Razak, Omer Bin Hussain and Saudia Subash
Understanding socially aware robot navigation
Kiran Jot Singh, Divneet Singh Kapoor and Balwinder Singh Sohi
A low power and high speed approximate adder for image processing applications
Dr. G. Narmadha, Dr. S. Deivasigamani, Dr. K. Balasubadra and Mr.M.Selvaraj
Design of Area Efficient, Low-Power and Reliable Transmission Gate-based 10T SRAM Cell for Biomedical
Application
Aswini Valluri, Sarada Musala and Muralidharan Jayabalan
Artificial neural network based simplified one day ahead forecasting of solar photovoltaic power generation
Muhammad Asim Munir, Abraiz Khattak, Kashif Imran, Abasin Ulasyar, Nasim Ullah Azhar Ul Haq and Adam Khan
Modeling and power optimization control of tidal energy systems
Ahmed G. Abo-Khalil, Khairy Sayed, Ahmed Elnozahy and B. G. Yu
Effect of membership functions and data size on the performance of ANFIS-based model for predicting path
losses in the VHF and UHF bands
N. T. Surajudeen-Bakinde, Nasir Faruk, Abubakar Abdulkarim, Abdulkarim A. Oloyede, Lukman A. Olawoyin,
Segun I. Popoola, Olugbenga Sowande and Emmanuel Adetiba
Making performance analysis of on grid photovoltaic energy systems: Example of Turkey
Ugur Kılıç and Ugur Kesen
Multiple Road-Objects Detection and Tracking for Autonomous Driving
Wael Farag
Green routing in a two-level network of cross docks given the shipping price (Case study: Pegah Co.)
Farhad Bavar, Majid Sabzehparvar and Mona Ahmadi Rad
Engineering and economic analysis of the production of sieve shaker for teaching particle size to students with
visual impairment
Rina Maryanti, Asep Bayu Dani Nandiyanto, Achmad Hufad, S. Sunardi, Risti Ragadhita, Meli Fiandini and
Muhammad Roil Bilad
Correlation between experimental and analytic approaches to study the erosion rate of aluminum-metal matrix
composites
M. Asaduzzaman Chowdhury, U. Kumar Debnath, M. Kchaou, B. Ahmed Shuvho, A. Rahman and B. Kumar Roy
A linear physical programming model for assembly line balancing problem
Muhammet Enes Akpinar
Predicting the Flow Zone Indicator of Carbonate Reservoirs using NMR Echo Transforms and Routine Open-
Hole Log Measurements: Insights from a Field Case Study Spanning Extreme Microstructure Properties
Mabkhout Al-Dousari, Salah Almudhhi and Ali A. Garrouch

http://www.kuwaitjournals.org/jer