

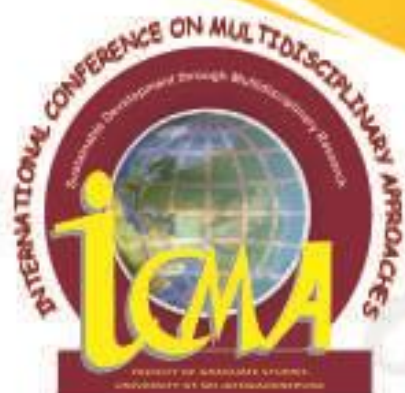


NATIONAL
SCIENCE
FOUNDATION

4th International Conference on Multidisciplinary Approaches - 2017

"Sustainable Development through Multidisciplinary Research"

PROCEEDINGS



JOINTLY ORGANIZED BY

**FACULTY OF GRADUATE STUDIES
UNIVERSITY OF SRI JAYAWARDENEPURA**

**MINISTRY OF SCIENCE, TECHNOLOGY
AND RESEARCH**

NATIONAL SCIENCE FOUNDATION

20TH OF SEPTEMBER, 2017

International Conference on Multidisciplinary Approaches - 2017

**“Sustainable Development through Multidisciplinary
Research”**

Conference Proceedings

20th to 22nd September 2017

Faculty of Graduate Studies
University of Sri Jayewardenepura

Nugegoda, Sri Lanka

Proceedings of the 4th International Conference on Multidisciplinary
Approaches – 2017

Faculty of Graduate Studies
University of Sri Jayewardenepura
Nugegoda
Sri Lanka

208 Pages

ISSN: 2386 - 1509

Copyright © *iCMA*

All rights are reserved according to the Code of Intellectual Property Act of Sri Lanka, 2003

Published by: Faculty of Graduate Studies, University of Sri Jayewardenepura,
Nugegoda, Sri Lanka

Tel: +94 112881571

Fax: +94 112802551

Email: icma@sjp.ac.lk

Disclaimer

The responsibility for opinions expressed, in articles, studies and other contributions in this publication rest solely with their authors, and this publication does not constitute an endorsement by the *iCMA-2017* of the opinions so expressed in them.

Official website of the Conference

<http://www.graduate.sjp.ac.lk/icma>

Contents

MESSAGE FROM THE MINISTER OF SCIENCE, TECHNOLOGY AND RESEARCH	iv
MESSAGE FROM THE VICE CHANCELLOR.....	v
MESSAGE FROM THE CONFERENCE CHAIR	vi
ENGINEERING, TECHNOLOGY & PHYSICAL SCIENCES	
POLICIES ALIGNED BUSINESS RULE FRAMEWORK FOR HEALTHCARE SERVICE SOLUTIONS.....	2
MoO ₃ /Au BACK CONTACT FOR ELECTRODEPOSITED CdS/CdTe SOLAR CELLS	3
CAPABILITY OF USING ORE MAGNETITE DIRECTLY AS CATHODE MATERIAL FOR SODIUM-ION RECHARGEABLE BATTERIES.....	4
A NEW COSMOLOGICAL MODEL INCLUDING INFLATION, DECELERATION, ACCELERATION AND DECELERATION AGAIN	5
A NEW UPPER MATRIX BOUND FOR THE SOLUTION OF THE DISCRETE ALGEBRAIC RICCATI EQUATION	6
APPLICATION OF SURVIVAL ANALYSIS FOR LOAN DATA.....	7
LOOSELY-COUPLED SYSTEM DESIGN FOR MODERN HOME AUTOMATION SYSTEMS	8
PEER-TO-PEER MOBILE COLLABORATION PLATFORM FOR REAL TIME VISUALIZATION OF MEDICAL IMAGE	9
MATHEMATICAL MODELLING AND SIMULATION OF THE TEMPERATURE OF SESAME OIL EXTRACTED IN SEKKU - A TRADITIONAL OIL EXTRACTION TECHNOLOGY	10
MODELLING, CONTROLLING AND SIMULATION OF A WIND TURBINE DRIVE TRAIN IN 'SimulationX' PLATFORM.....	11
FORECASTING MONTHLY AVERAGE PEPPER RETAIL PRICES USING A TRADITIONAL TIME SERIES MODEL AND AN ARTIFICIAL NEURAL NETWORK MODEL	12

AUTOMATIC TYRE PRESSURE REGULATION SYSTEM FOR THE OPTIMIZATION OF RIDE COMFORT	13
CONTEMPORARY AND COMPARATIVE STUDY OF CUSTOMS AND BELIEFS IN HOUSE CONSTRUCTION	14
SYNTHESIS AND CHARACTERIZATION OF A NAPHTHALENE-DERIVATIZED LIGAND AND ITS RHENIUM TRICARBONYL COMPLEX TOWARDS FLUORESCENT IMAGING.....	15
AN EXTENSION OF GOLDBACH’S CONJECTURE	16
VOICE AND GESTURAL CONTROL OF HOUSEHOLD APPLIANCES USING KINECT MOTION SENSOR.....	17
EFFECT OF LIGAND ATTACHED TO FLUORESCEIN ON THE PHOTOCURRENT OF DYE SENSITIZED SOLAR CELLS	18
ANALYSIS OF “ANGULIMALA SUTTA” USING VOICED TO UNVOICED RATIO AND FORMANT VARIATIONS.....	19
MODELLING OF MONTHLY VEHICLE REGISTRATION IN SRI LANKA USING SARIMA APPROACH	20
A STUDY ON THE PERFORMANCE OF MATHEMATICS AND SCIENCE SUBJECTS USING CANONICAL CORRELATION ANALYSIS	21
A SIMULATION PROCEDURE ON THE APPROPRIATE SEED SELECTION METHOD IN RESPONDENT DRIVEN SAMPLING	22
DETERMINATION OF RARE EARTH ELEMENT CONTENT IN PULMODDAI BASED MONAZITE.....	23
INTERPRETATION OF THREE GEOTHERMAL FIELDS SITUATED IN EASTERN PART OF SRI LANKA USING RESISTIVITY AND MAGNETIC METHODS.....	24
ACCESS CONTROLLING SOLUTION USING MOBILE PHONE SECURITY FEATURES	25
INTELLIGENT SYSTEM FOR HIGH RESOLUTION COMPUTED TOMOGRAPHY (HRCT) IMAGE ANALYSIS: A CONCEPT	26

CONTEMPORARY AND COMPARATIVE STUDY OF CUSTOMS AND BELIEFS IN HOUSE CONSTRUCTION

Chandra M.S.^{1*}, Nandapala K.² and Weerasinghe K.A.B.¹

¹Division of Civil Engineering Technology, Institute of Technology, University of Moratuwa, Sri Lanka

²Department of Construction Technology and Resource Management, Faculty of Industrial and Vocational Technology, University of Vocational Technology, Sri Lanka

madujithsagara123@gmail.com

Although this is an era with marvels of Science and Engineering, the shadows of customs and beliefs of diverse fields are still followed in different levels. It is evident that a considerable number of customs and beliefs in house construction are yet followed by people in countries like Sri Lanka, India and China. In this study, contemporary status and reasons behind admitting those beliefs were investigated through a questionnaire survey carried out among the main stakeholders of the construction industry. A sample of 210 individuals consist of 75 Civil Engineers, 45 Architects, 30 Astrologers, 30 Carpenters and 30 Masons were randomly selected for this study. The study revealed that 68% of respondents are believed in customs and beliefs while 32% disregard. 41% of Civil Engineers, 27% of Architects, 97% of Astrologers, 100% of Masons and 97% of Carpenters are believed in customs and beliefs. As specific responses of respondents, 81% opted not to erect three or more aligned openings and not to place wall plates, rafters or beams directly on top of the openings, 75% of respondents have no willingness to place more west facing doors and windows while 73% respondents reluctant on cross wall junctions in brick walls. The study revealed that, though Masons, Carpenters and Astrologers adopt those beliefs as they inherit them from generation to generation which are being startled of their occult grab, Civil Engineers and Architects believe on these with some understanding in Engineering concepts. It divulged that when the people become more educated they tend to discard traditional beliefs in building construction and deal with some knowledge on Engineering and Scientific concepts.

Keywords: *residential buildings, mini commercial buildings, customs and beliefs*