

International Conference on Science and Engineering in Mathematics, Chemistry and Physics

(ScieTech 2014)

Journal of Physics: Conference Series Volume 495

**Jakarta, Indonesia
13-14 January 2014**

Editors:

Ford Lumban Gaol

**Benfano Soewito
P. N. Gajjar**

**ISBN: 978-1-63266-720-5
ISSN: 1742-6588**

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© by the Institute of Physics
All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

NEW VIEW OF RELATIVITY THEORY	1
<i>Luiz Cesar Martini</i>	
THE SPACE-TIME MODEL ACCORDING TO DIMENSIONAL CONTINUOUS SPACE-TIME THEORY	10
<i>Luiz Cesar Martini</i>	
THE NEW BIG BANG THEORY ACCORDING TO DIMENSIONAL CONTINUOUS SPACE-TIME THEORY	19
<i>Luiz Cesar Martini</i>	
LINEAR FREE ENERGY RELATIONSHIP AND DEUTERIUM KINETIC ISOTOPE EFFECT OBSERVED ON PHOSPHO AND THIOPHOSPHORYL TRANSFER REACTIONS IN SOME ORGANOPHOSPHOROUS COMPOUNDS	25
<i>B. J. Lumbiny, Z. Hui, M. A. Islam, M. A. Quader, M. Rahman</i>	
DEVELOPMENT OF CMOS IMAGER BLOCK FOR CAPSULE ENDOSCOPE	34
<i>S. Shafie, F. A. M. Fodzi, L. Q. Tung, D. X. Lioe, I. A. Halin, W. Z. W. Hasan, H. Jaafar</i>	
RADIAL PROFILE OF MOMENTS OF INSTANTANEOUS AXIAL VELOCITY OF A FULLY PULSED AXISYMMETRIC JET	40
<i>Hariyo P. S. Pratomo, Klaus Brehmhorst</i>	
THE INFLUENCE OF BTO-BHF DIFFERENT COMPOSITION ON ITS FERROELECTRIC PROPERTIES	50
<i>M. Hikam, D. Suastiyanti, S. R. Adnan, B. Soegijono</i>	
INTRINSIC HYSTERESIS LOOPS CALCULATION OF BZT THIN FILMS	58
<i>M. Hikam, S. R. Adnan</i>	
TEMPERATURE EFFECTS ON DIFFUSION COEFFICIENT FOR 6-GINGEROL AND 6-SHOGAOL IN SUBCRITICAL WATER EXTRACTION	65
<i>Nor Ilia Anisa, Noor Azian, Mohd Sharizan, Yoshio Iwai</i>	
APPLICABILITY OF NANO ZERO VALENT IRON (NZVI) IN SONO – FENTON PROCESS	71
<i>M. R. Taha, A. H. Ibrahim, R. C. Amat, A. W. Azhari</i>	
DESIGNING PROCESS IMPROVEMENT OF FINISHED GOOD ON TIME RELEASE AND PERFORMANCE INDICATOR TOOL IN MILK INDUSTRY USING BUSINESS PROCESS REENGINEERING METHOD	80
<i>M. Dachyar, E. Christy</i>	
PERFORMANCE EVALUATION OF A DRILLING PROJECT IN OIL AND GAS SERVICE COMPANY IN INDONESIA BY MACBETH METHOD	90
<i>M. Dachyar, Novandra Rhezza Pratama</i>	
THE SELECTION REACTION OF HOMOGENEOUS CATALYST IN SOY-EPOXIDE HYDROXYLATION	99
<i>Flora Elvistia Firdaus</i>	
THE INFLUENCE OF BASIC PHYSICAL PROPERTIES OF SOIL ON ITS ELECTRICAL RESISTIVITY VALUE UNDER LOOSE AND DENSE CONDITION	106
<i>M H Z Abidin, F. Ahmad, D. C. Wijeyesekera, R. Saad</i>	
AITKEN DELTA-SQUARED GENERALIZED JUNGCK-TYPE ITERATIVE PROCEDURE	119
<i>M. De La Sen, R. Nistal</i>	
INSTANTANEOUS AND SCALE-VERSATILE GOURDRON THEORY: PAIR MOMENTUM EQUATION, QUASI-STABILITY CONCEPT, AND STATISTICAL INDETERMINACY REVEALING MASSES OF ELEMENTARY, BIO-MOLECULAR, AND COSMIC PARTICLES	128
<i>Ken Naitoh</i>	
OPTIMAL CYCLE TIME AND PRESERVATION TECHNOLOGY INVESTMENT FOR DETERIORATING ITEMS WITH PRICE-SENSITIVE STOCK-DEPENDENT DEMAND UNDER INFLATION	140
<i>Nita H. Shah, Arpan D. Shah</i>	
REVIEW ARTICLE: RECENT ADVANCES IN NANOMATERIAL FABRICATION	150
<i>Kitsakorn Locharoenrat</i>	
LOW WIRELESS POWER TRANSFER USING INDUCTIVE COUPLING FOR MOBILE PHONE CHARGER	156
<i>M. Fareq, M. Fitra, M. Irwanto, Syafruddin Hasan, M. Arinal</i>	

EFFECTS OF TAIWAN ROSELLE ANTHOCYANIN TREATMENT AND SINGLE- WALLED CARBON NANOTUBE ADDITION ON THE PERFORMANCE OF DYE- SENSITIZED SOLAR CELLS	163
<i>C. S. Chou, P. J. Tsai, P. Wu, G. G. Shu, Y. H. Huang, Y. S. Chen</i>	
SOLUTION OF ONE PHASE INVERSE STEFAN PROBLEM BY IEF METHOD	172
<i>M. M. Sarsengeldin, S. Guvercin, S. Kassabek</i>	
WELDABILITY OF A7075-T651 AND AZ31B DISSIMILAR ALLOYS BY MIG WELDING METHOD BASED ON WELDING APPEARANCES	179
<i>M. Ishak, M. R. Islam</i>	
THE EVALUATION OF HYDROXYAPATITE (HA) COATED AND UNCOATED POROUS TANTALUM FOR BIOMEDICAL MATERIAL APPLICATIONS	187
<i>Nadia Safuan, Irza Sukmana, Mohammed Rafiq Abdul Kadir, Deni Noviana</i>	
MATHEMATICAL MODELS FOR ESTIMATING EARTHQUAKE CASUALTIES AND DAMAGE COST THROUGH REGRESSION ANALYSIS USING MATRICES	194
<i>J. D. Urrutia, L. A. Bautista, E. B. Baccay</i>	
NUMERICAL SOLUTIONS OF FREE CONVECTION BOUNDARY LAYER FLOW ON A SOLID SPHERE WITH CONVECTIVE BOUNDARY CONDITIONS	209
<i>H. T. Alkassabeh, M. Z. Salleh, R. M. Tahar, R. Nazar</i>	
IDENTIFYING POTENTIAL MISFIT ITEMS IN COGNITIVE PROCESS OF LEARNING ENGINEERING MATHEMATICS BASED ON RASCH MODEL	219
<i>Sh Ataei, Z. Mahmud, M. N. Khalid</i>	
ELECTRICAL CONDUCTIVITY CHARACTERISTIC OF TIO2 NANOWIRES FROM HYDROTHERMAL METHOD	227
<i>Mohd Azlishah Othman, Noor Faridah Amat, Badrul Hisham Ahmad, Jose Rajan</i>	
10 GHZ MICROSTRIP SPANAR ANTENNAS: AN EXPERIMENTAL ANALYSIS	234
<i>Mohd Azlishah Othman, Hazwani Azman, Mohd Nor Husain, Mohamad Zoinol, Abidin Abd. Aziz, Yahaya Abd. Rahim, Ahmad Naim Che Pee, Mohamad Radzi Motsidi, Mohd Fairuz Iskandar Othman</i>	
ENERGY MONITORING BASED ON HUMAN ACTIVITY IN THE WORKPLACE	242
<i>N. H. Mustafa, M. N. Husain, M. Z. A. Abd Aziz, M. A. Othman, F. Malek</i>	
A SURVEY ON HUMAN BEHAVIOR TOWARDS ENERGY EFFICIENCY FOR OFFICE WORKER IN MALAYSIA	251
<i>N. H. Mustafa, M. N. Husain, M. Z. A. Abd Aziz, M. A. Othman, F. Malek</i>	
APPLICATION OF GENETIC ALGORITHM TO THE DESIGN OPTIMIZATION OF COMPLEX ENERGY SAVING GLASS COATING STRUCTURE	261
<i>F. M. Johar, F. A. Azmin, A. S. Shibghatullah, M. K. Suaidi, B. H. Ahmad, M. Z. A. Abd Aziz, S. N. Salleh M. Md Shukor</i>	
IMPLICIT FINITE DIFFERENCE SOLUTION FOR TIME-FRACTIONAL DIFFUSION EQUATIONS USING AOR METHOD	271
<i>A. Sunarto, J. Sulaiman, A. Saudi</i>	
ON THE MARANGONI INSTABILITY IN GAS ABSORPTION	279
<i>T. A. Poroyko, E. F. Skurygin</i>	
SELECTIVE FERMENTATION OF PITTED DATES BY <i>S. CEREVISIAE</i> FOR THE PRODUCTION OF CONCENTRATED FRUCTOSE SYRUPS AND ETHANOL	288
<i>Meilana Dharma Putra, Ahmed E. Abasaeed, Mohamed A. Zeinelabdeen, Mohamed H. Gaily, Ashraf K. Sulieman</i>	
PHENOMENA OF FOAMED CONCRETE UNDER ROLLING OF AIRCRAFT WHEELS	295
<i>Chun-Shui Jiang, Hong-Yu Yao, Xian-Bo Xiao, Xiang-Jun Kong, Ya-Jie Shi</i>	
KAZAKH TRADITIONAL DANCE GESTURE RECOGNITION	302
<i>A. K. Nussipbekov, E. N. Amirgaliyev, Minsoo Hahn</i>	
THE DEVELOPMENT OF GPS TROWAV TOOL FOR ATMOSPHERIC – TERRESTRIAL STUDIES	313
<i>W. Suparta</i>	
ANALYSIS DISTRIBUTION OF GALACTIC COSMIC RAYS PARTICLE ENERGY WITH POLAR ORBIT SATELLITE FOR GEANT4 APPLICATION	321
<i>W. Suparta, W. S. Putro</i>	
FORECASTING THE EARTH'S TRAPPED PARTICLE DISTRIBUTION USING HIERARCHICAL BAYESIAN SPATIO TEMPORAL MODEL	327
<i>Wayan Suparta</i>	
SPATIAL ANALYSIS OF GALACTIC COSMIC RAY PARTICLES IN LOW EARTH ORBIT/NEAR EQUATOR ORBIT USING SPENVIS	333
<i>W. Suparta, S. K. Zulkeple</i>	

IONIC WIND PHENOMENON AND CHARGE CARRIER MOBILITY IN VERY HIGH DENSITY ARGON CORONA DISCHARGE PLASMA	339
<i>M. Nur, N. Bonifaci, A. Denat</i>	
IMPROVEMENT TEXT COMPRESSION PERFORMANCE USING COMBINATION OF BURROWS WHEELER TRANSFORM, MOVE TO FRONT, AND HUFFMAN CODING METHODS.....	349
<i>Mohammada Aprilianto, Maman Abdurohman</i>	
IMPLEMENTATION OF THE INTELLIGENT VOICE SYSTEM FOR KAZAKH.....	355
<i>Zh Yessenbayev, N. Saparkhojayev, T. Tibeyev</i>	
LOW POWER SHOE INTEGRATED INTELLIGENT WIRELESS GAIT MEASUREMENT SYSTEM.....	360
<i>Y. Wahab, M. Mazalan, N. A. Bakar, A. F. Anuar, M. Z. Zainol, F. Hamzah</i>	
DESIGN AND ANALYSIS OF VARIOUS MICROCANTILEVER SHAPES FOR MEMS BASED SENSING	367
<i>H. F. Hawari, Y. Wahab, M. T. Azmi, A. Y. Md. Shakaff, U. Hashim, S. Johari</i>	
ERROR CORRECTION FOR FOOT CLEARANCE IN REAL-TIME MEASUREMENT	376
<i>Y. Wahab, N. A. Bakar, M. Mazalan</i>	
THE ESTIMATION PROCESS IN BAYESIAN STRUCTURAL EQUATION MODELING APPROACH	385
<i>Ferra Yanuar</i>	
PREDICTION AND VALIDATION OF HEAT RELEASE DIRECT INJECTION DIESEL ENGINE USING MULTI-ZONE MODEL.....	394
<i>Bagus Anang Nugroho, Bambang Sugiarto, Lukman Shalahuddin</i>	
A WELL-BALANCED NUMERICAL SCHEME FOR SHALLOW WATER SIMULATION ON ADAPTIVE GRIDS.....	401
<i>H. J. Zhang, J. Z. Zhou, S. Bi, Q. Q. Li, Y. Fan</i>	
A COMPOSITIONAL APPROACH TO BUILDING APPLICATIONS IN A COMPUTATIONAL ENVIRONMENT	411
<i>V. V. Roslovtshev, L. D. Shumsky, V. E. Wolfengagen</i>	
USING MULTIPLIERS ANALYSIS IN ORDER TO GET ANOTHER PERSPECTIVE RELATED TO THE ROLE OF ICT SECTORS IN NATIONAL ECONOMY OF INDONESIA: 1990-2005.....	421
<i>Ubaidillah Zuhdi</i>	
Author Index	