7th International Conference on Applied Physics and Mathematics (ICAPM 2017)

Journal of Physics: Conference Series Volume 814

Tokyo, Japan
20 – 22 January 2017

ISBN: 978-1-5108-3859-8
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© (2017) by the Institute of Physics
All rights reserved. The material featured in this book is subject to
IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2017)

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: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

Table of contents

Volume 814

7th International Conference on Applied Physics and Mathematics (ICAPM 2017)
20–22 January 2017, Tokyo, Japan

Accepted papers received: 16 February 2017
Published online: 31 March 2017

Preface

011001
OPEN ACCESS
7th International Conference on Applied Physics and Mathematics (ICAPM 2017)

011002
OPEN ACCESS
Conference Committee

011003
OPEN ACCESS
Peer review statement

Papers

Mathematical Modeling and Analysis

012001
OPEN ACCESS
Evaluation of lead-time procurement in Pupuk Kaltim Inc. using pure-birth analysis

Novaldy Pratama Putra and Atina Ahdika.....1

012002
OPEN ACCESS
Comparison of INAR(1)-Poisson model and Markov prediction model in forecasting the number of DHF patients in west java Indonesia

Atina Ahdika and Novyan Lusiyana.....8

012003
OPEN ACCESS
Numerical simulations on the flow fields of dynamic axial compression columns in chromatography processes

Ru Chien Liang, Cheng Che Liu, Ming Tsai Liang and Jiann Lin Chen.....15

012004
OPEN ACCESS
Numerical study of MPS method with large eddy simulation for fluid solid coupling problem

Chao YANG, Huaixin ZHANG and Huilan YAO.....22

012005
OPEN ACCESS
First order transition in two dimensional coulomb glass

Preeti Bhandari and Vikas Malik.....27

012006
OPEN ACCESS
A model for inter-laminar shear stress in laminated composites

W Zaki, V Nguyen and R Umer.....33

012007
OPEN ACCESS
Comparison between a typical and a simplified model for blast load-induced structural response

A Abd-Elhamed and S Mahmoud.....37

Computer and Mathematical Engineering

012008
OPEN ACCESS
The research of 4th grade mathematical curriculum electronic picture book construction and development in integrating indigenous culture

Yen Ting Chen and Juei Hsin Wang.....45

012009
OPEN ACCESS
Almost Boolean fuzzy rings

B A Alaba and Y G Wondifraw.....52

012010
OPEN ACCESS
Efficient large scale commute time embedding

H I Hahn.....58

012011
OPEN ACCESS
Comparison of combustion products by the iteration method and application of gasoline and biogas

Paramust Juntarakod.....63

012012
OPEN ACCESS
Integrated optimisation technique based on computer-aided capacity and safety evaluation for managing downstream lane-drop merging area of signalised junctions

CHAI Chen and WONG Yiik Diew.....72

Applied Mathematics

012013
OPEN ACCESS
Some results on circulant and skew circulant type matrices with k-Fibonacci sequences

Ying Zhang.....79

012014
OPEN ACCESS
A new spectral method using legendre wavelets for shallow water model in limited-area

Fukang Yin, Junqiang Song, Jianping Wu and Xiaoqun Cao.....88

012015
OPEN ACCESS
Finite time quenching for a nonlinear diffusion equation with singular boundary flux

Ying Yang.....96

012016
OPEN ACCESS
Rational Chebyshev pseudospectral method for long-short wave equations

Zeting Liu and Shujuan Lv.....102

012017
OPEN ACCESS
An accelerated randomized extended Kaczmarz algorithm

Xu Xiang, Xu Liu, Wentang Tan and Xiang Dai.....108

012018
OPEN ACCESS
Economic growth and concentrations

Shu-hen Chiang.....116

012019
OPEN ACCESS
Approximate solutions for the nonlinear duffing oscillator with an external force

Jutamas Kirinin, Kanokwan Mahithithummath, Narisara Kongsawasdi and Jaipong Kasemsuwan.....122

Physical Electronics and Applications

012020
OPEN ACCESS
Application of exponential homotopy algorithm in the inverter harmonic elimination

Li Zhang.....129

012021
OPEN ACCESS
Non-orthogonal frequency shift keying for optical wireless link based on visible light emitting diode

Yong-Yuk Won, Sang Min Yoon and Dongsun Seo.....135

012022
OPEN ACCESS
Improved synchronization criteria for time-delayed chaotic Lur'e systems using sampled-data control

Wenyong Duan, Yan Li, Xiaorong Fu and Baozhu Du.....139

012023
OPEN ACCESS
Efficient parallel analysis of transient plane wave scattering from nonplanar doubly periodic structures

Nan-Wei Chen.....144