Index

AUTHOR

A
Danang Sudarwoko Adi, 169
Afnimar, 159, 313
Lienda Aliwarga, 14
Tjandra Anggraeni, 41
Fitri Aprilianty, 301
I Nyoman P. Aryantha, 41
Jun-ichi Azuma, 125

B
Ayhan Bozkurt, 50

C
Cari, 205
Sevim Ünugur Çelik, 50
Laras Cempaka, 14

D
Darharta Dahrin, 1, 107
Hartiwi Diastuti, 224
Wahyu Dwianto, 169
Fenny M. Dwivany, 194

E
Ratna Ediati, 76
Endarwin, 251
Rizkita R. Esyanti, 41

F
Hamzah Fansuri, 76
Fitria, 169
Neville Fowkes, 235

G
Hendra Grandis, 1, 107
Dodo Gunawan, 251
Irfan Gustian, 50

H
Safwan Hadi, 251
Resnanti Utami Handayani, 194
Laksana Tri Handoko, 140
Andreas Hartanto, 140
Sri Hartati, 169
Takahisa Hayashi, 169
Euis Hermiati, 125

I
Iriawati, 301
Masyhur Irsyam, 313

J
Jafaruddin, 290
Lia D. Juliawaty, 224
Suwannee Junyapoon, 183

K
Rumi Kaida, 169
Reiji Kobayashi, 159
Yoichi Kojima, 175
Jusak Sali Kosasih, 26, 140
Made Tri Ari Penia Kresnowati, 14
Cecep Kusmana, 269

N
Danny Hilman Natawidjaja, 159
Mohd Salmi Md Noorani, 91
Puguh Noviarsito, 278
Agung Endro Nugroho, 278
Hadi Nur, 76
Nuning Nuraini, 290

P
Busayamas Pimpunchat, 183
Didik Prasetyoko, 76
Susanto Purwo, 14
Juni Wijayanti Puspita, 290
Mustika Ladia Putri, 62

R
Zainab Ramli, 76
Yulita Molliq Rangkuti, 91
Yudi Renata, 62

Mohamad Ridwan, 313
Sugeng Riyanto, 278
Muhammad Navis Rofii, 175

S
Syafruddin Side, 91
Marlia Singgih, 224
Rustam Efendi Siregar, 50
Khwansiri Sirimangkhala, 183
Siswanto, 251
Edy Soewono, 290
Suhadi, 26
Suparmi, 205
Djoko Suprijanto, 62
Wawang Suratno, 50
Ani Suryani, 269
Ichsan Suwandhi, 269
Shigehiko Suzuki, 175
Yana M. Syah, 224

T
Tatang Tiryana, 269
Bayong Tjasyono H.K., 251
Shuntaro Tsubaki, 125

U
Maria Ulfa, 76
Umrah, 41

W
Ika Wahyuni, 169
Sri Widiyantoro, 313

Y
Noriko Yamamoto, 175
Hiroaki Yamanaka, 313

Z
Ahmad Zainuddin, 50
Freddy Permana Zen, 26, 140

SUBJECT

α
α-curcumene, 224, 226, 227, 228, 229

1
1H-benzotriazole, 50, 52

2
2,4-D, 301, 302, 303, 305, 307, 308, 311

A
AChM3 receptors, 278, 279, 284, 285, 286, 287, 288
acid-base complex pair, 50, 55, 56
activated carbon, 125, 126, 127, 128, 130, 131, 132, 133, 134, 136
adiabatic quantum computation, 26, 37
anatase, 76, 77, 80, 83, 84, 86, 87
anomaly enhancement, 107, 109
antagonism, 278, 279, 284, 285
antibacterial, 224, 225, 226, 227, 228
asperity, 159, 166, 167

B
banana, 194, 195, 196, 197, 198, 199, 200
BAP, 301, 302, 303, 305, 307, 308, 311, 312
basic reproductive ratio, 290, 291, 294, 297, 298
Black pod disease, 41
bound state solution, 205
boundary tracing, 235, 246

C
calcinations, 76, 84
cassava pulp, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136
cocoa bean, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
cocoa plantation, 41
Coleman-Weinberg potential, 140, 141, 152, 155, 156
composition, 269, 271, 273, 275
CST, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267

CSTm, 251, 252, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267
Curcuma xanthorrhiza, 224, 231, 232, 233
curcumin, 224, 226, 227

D
D. thoracicus, 41, 42, 43, 44, 45, 46, 47, 48
decoding error probability performance, 62
density estimation, 1
Dirac equation, 205, 206, 207, 210, 211, 212, 217, 218, 220, 221, 222
dynamical model, 290

E
engineering bedrock, 313, 322, 324
environmental stress, 194, 195, 201
enzymatic hydrolysis, 169, 170, 171
essential oil, 269, 270, 272, 273, 275
ethanol, 169, 171, 172
ethylene, 194, 195, 197, 199, 200
exact solutions, 235, 238, 246, 247, 248
extra Hamiltonian, 26, 30, 32, 33, 34, 35, 36, 37

F
fast Fourier transform (FFT), 107
fermentation, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
filtering, 107, 122
forecasting, 183, 190, 192
furnish type, 175, 180, 181

G
generalized Pöschl-Teller potential, 205, 206, 207, 211, 212, 217, 220
glucose, 125, 126, 127, 128, 129, 130, 132, 134, 135, 136
gravity, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122

H
Hadamard gate, 26, 27, 32, 33, 34, 35, 36, 37
haze problem, 183, 184, 186, 190
He's polynomial, 91, 92
Hermitian self-dual codes, 62
homogeneous, 50, 52
homotopy perturbation method, 91, 92, 104
hot pressing, 175, 176, 179, 181
hydrolysis, 125, 126, 127, 129, 130, 131, 132, 134, 135, 136

I
ileum, 278, 279, 280, 285, 286, 287
infrared, 251, 253, 256, 267
isolated guinea pig, 278, 287

J
Jakarta, 313, 314, 315, 319, 321, 322, 324, 325

L
Lagrange multiplier, 91, 92, 95, 98, 99
lexicographical ordering, 62, 74
lignocelluloses, 169
linear inversion, 1
Litsea cubeba, 269, 270, 272, 275, 276, 277
little Higgs, 140, 141, 143, 146, 147, 156

M
MaACS2, 194, 195, 196, 197, 198, 199, 200
marmin, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288
mat panels, 175, 176, 177, 178, 180, 181
mathematical model, 183, 184
MDS codes, 62, 63, 66, 70, 73, 74
microtremor array, 313, 314, 315, 316, 321, 324
microwave, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136
mineral prospecting, 1

mosquito-chicken interaction, 290
multivariate logistic regression, 183

N
Nambu-Goldstone boson, 140, 141, 151
near-MDS codes, 62, 63, 74
NMR analysis, 224, 225, 227, 228
non-central potentials, 205, 206, 207, 212
nonlinear interpolation, 26

O
optical refraction, 235
Orbifold, 140, 142, 157
oxalic acid, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 136

P
P. palmivora, 41, 43, 44, 47, 48
partial differential equations, 235, 248
passive microwave, 251, 252, 255, 267
phenol hydroxylation, 76, 77, 79, 87
PLANTS, 278, 279, 282, 285, 287
PM10, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193
polymer electrolyte membranes, 50, 57, 59
potatoes (Solanum tuberosum L.), 301, 311
potential field, 1, 2, 4
potential fields methods, 107
prior information, 1, 2, 4
proton conductivity, 50, 51, 53, 57, 58, 59, 60
pulp degradation, 14, 15, 24

R
rainfall estimation, 251, 252, 253, 259, 260, 261, 262, 263, 266, 267
Real-Time PCR (qPCR), 194
rutile, 76, 77, 80, 83, 84, 86, 87

S
S. uliginosa Foxw., 169, 171, 172, 173
Scherk-Schwarz breaking, 140
severity parameter, 125, 127, 129, 135, 136
shallow rupture, 159
SIR model, 91, 92, 95, 97, 100
site class, 313, 314, 320
site types, 269
somatic embryogenesis, 301, 302, 307, 311
source process, 159
stability analysis, 290
Standard Model, 140, 158
starter, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24
stem node, 301
Sulawesi, 41
Sulfonated polysulfone, 50, 54
surface displacement, 159, 160, 163, 168
SUSY quantum mechanics, 205, 206, 207, 220
S-wave velocity, 313, 314, 317, 319, 320, 321, 322, 323, 324

T
teleseismic data, 159, 160, 162, 167
temperature, 175, 176, 177, 178, 179, 180, 181
time complexity, 26
TiO_2/TS-1, 76, 78, 80, 81, 82, 83, 84, 86, 87
tissue culture, 301, 302
TOCSY-1D, 224, 226, 228, 229
Trichoderma sp., 41, 42, 43, 44, 45, 46, 47, 48, 49
trigonometric Pöschl-Teller potential, 205

V
vapor pressure, 175, 176, 178, 179, 180, 181
variational iteration method, 91, 92, 104
variational principle, 26

varieties, 269

W
WNV transmission, 290, 291, 292, 293, 298

X
xanthorrhizol, 224, 225, 226, 227, 228, 229
xylem, 169, 172, 173

Y
yeast, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
young leaf, 301, 302, 307

List of Reviewers

1. Rino R. Mukti (Division of Inorganic and Physical Chemistry, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Bandung, Indonesia)
2. Eng Poh Ng (School of Chemical Sciences, Universiti Sains Malaysia, Pulau Pinang, Malaysia)
3. Ka Lun Wong (National Institute of Education, Nanyang Technological University, Singapore)
4. Wahyu Srigutomo (Department of Physics, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Bandung, Indonesia)
5. Djedi S. Widarto (New Energy & Green Technology - Upstream Technology Center, PT Pertamina, Jakarta, Indonesia)
6. Sparisoma Viridi (Nuclear Physics and Biophysics Research Group, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Bandung, Indonesia)
7. Hendry Izaac Elim (Edu. Phys. Dept., STKIP Surya, Tangerang, Indonesia)
8. Veinardi Suendo (Division of Inorganic and Physical Chemistry, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Bandung, Indonesia)
9. Jon-Lark Kim (Department of Mathematics, Sogang University, Seoul, South Korea)
10. Intan Muchtadi (Algebra Research Group, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Bandung, Indonesia)
11. Asep K. Supriatna (Department of Mathematics, Faculty of Mathematics and Natural Sciences, University of Padjadjaran, Jatinangor-Sumedang, Indonesia)
12. Hengki Tasman (Department of Mathematics. Faculty of Mathematics and Natural Science, Universitas Indonesia, Depok, Indonesia)
13. Trimurti Hesti Wardini (School of Life Sciences and Technology, Institut Teknologi Bandung, Bandung, Indonesia)
14. Dina Yulia (CSIRO Plant Industry, Canberra, Australia)
15. Jean-Yves Paul (Centre for Tropical Crops and Biocommodities, Queensland University of Technology, Australia)
16. Fenny Martha Dwivany (Genetics and Molecular Biotechnology, School of Life Sciences an Technology, Institut Teknologi Bandung, Bandung, Indonesia)
17. Triyanta (Theoretical High Energy Physics Group, Department of Physics, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Bandung, Indonesia)

18. S.Sekine (Association for the Development of Earthquake Prediction, Tokyo, Japan)
19. Hiroe Miyake (Earthquake Research Institute, University of Tokyo, Tokyo, Japan)
20. Khreshna Syuhada (Statistics Research Division, Faculty of Mathematics and Natural Sciences,. Institut Teknologi Bandung, Bandung, Indonesia)
21. Puji Lestari (Department of Environmental Engineering, Faculty of Civil and Environmental Engineering, Institut Teknologi Bandung, Bandung, Indonesia)
22. I Wayan Mangku (Mathematics Department, Bogor Agricultural Institute, Bogor, Indonesia)
23. Prihadi Sumintadireja (Applied Geology, Faculty of Earth Science and Technology, Institut Teknologi Bandung, Bandung, Indonesia)
24. Satria Bijaksana (Faculty of Mining and Petroleum Engineering, Institut Teknologi Bandung, Bandung, Indonesia)
25. Ahmad Faizal (Plant Science and Biotechnology Research Group, School of Life Sciences and Technology, Institut Teknologi Bandung, Bandung, Indonesia)
26. Wang Xingbiao (Key Laboratory for Conservation and Utilization of Bio-Resource, Yunnan University, P. R. China)
27. Rina Ratnasih (School of Life Sciences and Technology, Institut Teknologi Bandung, Bandung, Indonesia)
28. Salim Hiziroglu (Department of Natural Resource Ecology and Management, Oklahoma State University - Stillwater, United States)
29. Yayat Hidayat (School of Life Sciences and Technology, Institut Teknologi Bandung, Bandung, Indonesia)
30. Freddy Permana Zen (Department of Physics, Faculty of Mathematics and Natural Sciences, Bandung Institute of Technology, Indonesia)
31. Bobby E. Gunara (Department of Physics, Faculty of Mathematics and Natural Sciences, Bandung Institute of Technology, Indonesia)
32. Unang Supratman (Chemistry Department, Faculty of Mathematics and Natural Sciences, Padjadjaran University, Indonesia)
33. Yoshihito Shiono (Department of Food, Life, and Environmental Science, Yamagata University, Japan)
34. Ina Juaeni (Indonesian National Institute of Aeronautics and Space – LAPAN, Indonesia)
35. Jan Fokke Meirink (Climate Observations Department, Royal Netherlands Meteorological Institute, Netherlands)
36. Arry Yanuar (Faculty of Pharmacy, University of Indonesia, Indonesia)
37. Hengki Tasman (Mathematics Department, Faculty of Mathematics and Natural Sciences, University of Indonesia)
38. S.C. Chen (Department of Public Health, Chung Shan Medical University, Taiwan)

Journal of Mathematical and Fundamental Sciences
Guidelines for Author

1. Standard of reporting
Authors should present an accurate account of the work performed as well as an objective discussion of its significance. Underlying data should be represented accurately in the paper. A paper should contain sufficient detail and references to permit others to replicate the work. Fraudulent or knowingly inaccurate statements constitute unethical behavior are unacceptable. Professional publication articles should also be accurate and objective, and editorial 'opinion' works should be clearly identified.

2. Exclusivity of work
The authors should ensure that they have written entirely original works, and if the authors have used the work and/or words of others this should be appropriately cited or quoted. Plagiarism takes many forms, from 'passing off' another's paper as the author's own paper to copying or paraphrasing substantial parts of another's paper (without attribution), to claiming results from research conducted by others. Plagiarism in all its forms constitutes unethical publishing behavior and is unacceptable. An author should not in general publish manuscripts describing essentially the same research in more than one journal or primary publication. Submitting the same manuscript to more than one journal concurrently constitutes unethical publishing behaviour and is unacceptable. In general, an author should not submit for consideration in another journal a previously published paper. We consider for publication from conference paper if it is only an extended version of conference paper with at least 30% of new material.

3. Hazards and Human or Animal Subjects
If the work involves chemicals, procedures or equipment that have any unusual hazards inherent in their use, the author must clearly identify these in the manuscript. If the work involves the use of animal or human subjects, the author should ensure that the manuscript contains a statement that all procedures were performed in compliance with relevant laws and institutional guidelines and that the appropriate institutional committee(s) has approved them. Authors should include a statement in the manuscript that the informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed.

4. Authorship of the Paper and Copyright
Authorship should be limited to those who have made a significant contribution to the conception, design, execution, or interpretation of the reported work. All those who have made significant contributions should be listed as co-authors. Whilst those who have participated in certain substantive aspects of the research project, they should be acknowledged or listed as contributors. The corresponding author should ensure that all appropriate and inappropriate co-authors are included on the paper, and that all co-authors have seen and approved the final version of the paper and have agreed to its submission for publication. No manuscript can be published unless accompanied by a signed publication agreement, which serves as a transfer of copyright from author to publisher. A copy of that agreement is required after the paper is accepted.

5. Acknowledgement
Proper acknowledgment of the work of others must always be given. Authors should cite publications that have been influential in determining the nature of the reported work. Information obtained privately, as in conversation, correspondence or discussion with third parties, must not be used or reported without explicit, written permission from the source. Information obtained in the course of confidential services, such as refereeing manuscripts or grant applications, must not be used without the explicit written permission of the author of the work involved in these services.

6. Disclosure Requirements
Author when submitting a manuscript, must disclose any meaningful affiliation or involvement, either direct or indirect, with any organization or entity with a direct financial interest in the subject matter or materials discussed (for example, employment, consultancies, stock ownership, grants, patents received or pending, royalties, honoraria, expert testimony). These kinds of financial involvement are fairly common, unavoidable, and generally do not constitute a basis for rejecting a manuscript. Specifics of the disclosure will remain confidential. If deemed appropriate by the Scientific Editor, a general statement regarding disclosure will be included in the Acknowledgment section of the manuscript.

7. Errors in Published Works
When an author discovers a significant error or inaccuracy in his/her own published work, it is the author's obligation to promptly notify the journal editor or publisher and cooperate with the editor to retract or correct the paper. If the editor or the publisher learns from a third party that a published work contains a significant error, it is the obligation of the author to promptly retract or correct the paper or provide evidence to the editor of the correctness of the original paper.

8. Disclaimer
Opinions expressed in articles published in the *Journal of Mathematical and Fundamental Sciences* are those of the author(s) and do not necessarily represent opinions of the Bandung Institute of Technology (ITB). The *Journal of Mathematical and Fundamental Sciences* does not guarantee the appropriateness for any purpose of any method, product, process, or device described or identified in an article. Trade names, when used, are only for identification and do not constitute endorsement by *Journal of Mathematical and Fundamental Sciences*.

9. Manuscript preparation

Use the English language and the SI system (Système International d'Unités, often referred as "International Units") for measurements and units. Manuscript in MS Word or PDF format (generated from MS Word) is to be submitted online through http://journal.itb.ac.id/. The length of manuscript is expected not to exceed 20 printed pages (single space) including abstract, figures, tables and references. An abstract between 100 and 200 words describes the significance of manuscript should be included. The authors should supply 5-10 keyword or phrases that characterizes their manuscript. Use 11 pt Times New Roman fonts for body of the text with 1.0 line spacing between lines. The references should be numbered consecutively in the order of their appearance and should be complete, including authors' initials, the title of the paper, the date, page numbers, and the name of the sponsoring society. Please compiles references as shown in the examples below. Figures are printed in black & white, while color figures are only available online. Adjust the size of figures and tables as they will be appeared. All figure captions should be legible, minimum 8 point type. For all equations, use either Microsoft Equation Editor or MathType add-on (equation using Office 2007 are not acceptable). Equations are numbered consecutively in parenthesis, e.g. (1), and set at the right margin.

Reference examples:

[1] Sutasurya, L.A. & Riyanto, B., *Title of Paper*, Name of Journal, **8**(1), pp. 20-25, Dec. 2005. (Journal)

[2] Sutasurya, L.A., Handojo, A. & Riyanto, B., *Title of book*, ed. 2, Publisher, 2007. (Book)

[3] Williams, J., *Name of Paper*, Name of Book, Name of the editor(s), eds., Publisher, pp. 67-69, 2006. (Book with paper title and editor)

[4] Suharto (ed), *Title of Paper,* Name of Proc., pp. 5-10, 2008. (Conference Proceedings)

[5] Name of the author(s), *Title of paper* (if available), Organization, URL Link, (1 April 2011). (URL Link)

[6] Nicole, R., *Title of Paper*, Name of Journal, submitted for publication. (Pending publication)

[7] John, K., *Title of Paper*, unpublished. (Unpublished manuscript)

[8] Rashid, L., *Title of Dissertation*, PhD dissertation, Name of Dept., Name of Univ., City, 2010. (Thesis or Dissertation)

[9] Jenny, P., Name of Institution, City, personal communication, 2010. (Personal communication)

[10] Name of the author(s), *Title of Technical Report*, Technical Report TR-0334 (34-56), Name of Institution, City, Dec. 2009. (Technical report with report number)