

2nd International Conference on Graph Theory and Information Security

Procedia Computer Science Volume 74

Bandung, Indonesia
21 - 23 September 2015

Editors:

**Rinovia Simanjuntak
Edy Tri Baskoro**

Mirka Miller

ISBN: 978-1-5108-1671-8

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 Elsevier B.V.
All rights reserved.

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact Elsevier B.V.
at the address below.

Elsevier B.V.
Radarweg 29
Amsterdam 1043 NX
The Netherlands

Phone: +31 20 485 3911
Fax: +31 20 485 2457

<http://www.elsevierpublishingsolutions.com/contact.asp>

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



Contents

Preface	
R. Simanjuntak, E.T. Baskoro, M. Miller	1
Degree/Diameter Problem for Mixed Graphs	
N. López, H. Pérez-Rosés	2
On Unicyclic Ramsey (mK_2, P_3) –Minimal Graphs	
K. Wijaya, E.T. Baskoro, H. Assiyatun, D. Suprijanto	10
On Ramsey Minimal Graphs for the Pair Paths	
D. Rahmadani, E.T. Baskoro, H. Assiyatun	15
On the Restricted Size Ramsey Number	
D.R. Silaban, E.T. Baskoro, S. Uttunggadewa	21
On Size Multipartite Ramsey Numbers for Stars versus Cycles	
A. Lusiani, S. Sy, E.T. Baskoro, C. Jayawardene	27
Connected Size Ramsey Numbers for Matchings versus Cycles or Paths	
B. Rahadjeng, E.T. Baskoro, H. Assiyatun	32
Resolving Sets without Isolated Vertices	
P. Jeya Bala Chitra, S. Arumugam	38
Independent Dominator Sequence Number of a Graph	
S. Arumugam, B. Jayaram, K. Thulasiraman	43
Fractional Metric Dimension of Tree and Unicyclic Graph	
D.A. Krismanto, S.W. Saputro	47
The Partition Dimension of a Subdivision of a Complete Graph	
Amrullah, E.T. Baskoro, R. Simanjuntak, S. Uttunggadewa	53
The Partition Dimension of Some Families of Trees	
K.Q. Fredlina, E.T. Baskoro	60
Partition Dimension of Some Classes of Trees	
Ida Bagus Kade Puja Arimbawa K., E.T. Baskoro	67
Partition Dimension of Some Classes of Homogenous Disconnected Graphs	
D.O. Haryeni, E.T. Baskoro	73
The Locating-Chromatic Number of Binary Trees	
D.K. Syofyan, E.T. Baskoro, H. Assiyatun	79
The Bounds on the Locating-Chromatic Number for a Subdivision of a Graph on One Edge	
I.A. Purwasih, E.T. Baskoro, H. Assiyatun, D. Suprijanto	84
On Locating-Chromatic Number for Graphs with Dominant Vertices	
D. Welyyanti, E.T. Baskoro, R. Simanjuntak, S. Uttunggadewa	89
Cycle-Super Antimagicness of Connected and Disconnected Tensor Product of Graphs	
Dafik, A.K. Purnapraja, R. Hidayat	93
A Heuristic for Distance Magic Labeling	
F. Yasin, R. Simanjuntak	100
An Upper Bound on the Total Vertex Irregularity Strength of the Cartesian Product of P_2 and an Arbitrary Regular Graph	
R. Ramdani, A.N.M. Salman, H. Assiyatun	105
Total Vertex-Irregularity Labelings for Subdivision of Several Classes of Trees	
Susilawati, E.T. Baskoro, R. Simanjuntak	112
On Total Irregularity Strength of Double-Star and Related Graphs	
D. Indriati, Widodo, I.E. Wijayanti, K.A. Sugeng	118
On the Total Irregularity Strength of Fan, Wheel, Triangular Book, and Friendship Graphs	
M.I. Tilukay, A.N.M. Salman, E.R. Persulesy	124
Algorithm to Construct Graph with Total Vertex Irregularity Strength Two	
D.R. Silaban, H. Kekaleniante, S. Lutpiah, K.A. Sugeng, E.T. Baskoro	132
The Rainbow (Vertex) Connection Number of Pencil Graphs	
D.N.S. Simamora, A.N.M. Salman	138
The Rainbow Connection Number of an n -Crossed Prism Graph and its Corona Product with a Trivial Graph	
D. Resty, A.N.M. Salman	143

Upper Bounds for Rainbow 2-Connectivity of the Cartesian Product of a Path and a Cycle B.H. Susanti, A.N.M. Salman, R. Simanjuntak	151
On the Rainbow and Strong Rainbow Connection Numbers of the m -Splitting of the Complete Graph K_n F. Septyanto, K.A. Sugeng	155
The Rainbow Connection Number of Origami Graphs and Pizza Graphs S. Nabila, A.N.M. Salman	162
The Rainbow Connection Number of a Flower (C_m, K_n) Graph and a Flower (C_3, F_n) Graph I.S. Kumala, A.N.M. Salman	168
Graph Coloring Based on Evolutionary Algorithms to Support Data Hiding Scheme on Medical Images W. Astuti, Adiwijaya	173
Information Concealment through Noise Addition B. Rahardjo, Kuspriyanto, I. Muchtadi-Alamsyah, M.W. Paryasto	178
Identification of Bottleneck Elements in Cellular Manufacturing Problem S. Arumugam, J. Saral	181