

Chandana Gamage

Proceedings of the CS&ES Conference
2009



Computer Science & Engineering Society
c/o Department of Computer Science & Engineering
University of Moratuwa
24th July 2009

The proceedings comprise the papers presented at the CE&ES Conference 2009 organized by the Computer Science and Engineering Society in collaboration with the Department of Computer Science and Engineering of the University of Moratuwa, Sri Lanka and held at the World Trade Center, Colombo, Sri Lanka on 24th July 2009.

The views and findings in the papers are those of the authors, and are not meant to reflect those of the Computer Science and Engineering Society or the University of Moratuwa.

EDITED BY

Vishaka Nanayakkara

Upuli Pushpika Gunasinghe

PUBLISHED BY

The Computer Science and Engineering Society

c/o Department of Computer Science and Engineering

University of Moratuwa

Sri Lanka

24th July 2009

©The Computer Science and Engineering Society, c/o Department of Computer Science and Engineering,
University of Moratuwa, Sri Lanka

ISBN-978-955-9027-32-4

MESSAGE FROM CONFERENCE CO-CHAIRS AND THE EDITORIAL COMMITTEE

Computer Science and Engineering Society (CS&ES) is the forum which brings together undergraduates and the graduates of the Department of Computer Science and Engineering (CSE), University of Moratuwa, and the IT industry. Twelve years ago when CS&ES was started, the objectives were to assist the CSE department to improve the quality of its degree programme, expand the relationships with the industry, enhance the contributions to national IT development and promote the career development of CSE graduates.

CS&ES organises many activities every year to achieve these objectives. The grand finale of the events of the year is the CS&ES Annual General Meeting which will be combined with a seminar. This year when the committee decided to have a conference to give an opportunity for CSE graduates to present their academic research we had only a very little idea of the outcome.

This proceeding is only a part of that outcome. All the authors will present their work at the conference on the 24th July 2009. The three keynote speakers will discuss challenges of the current economic crisis and how IT can be used as a catalyst to overcome problems.

The editorial committee has been working from the time that CS&ES decided to have this conference. Our Call for Papers was well responded and we received 34 papers. The reviewers worked diligently on these papers and this proceeding has 18 peer reviewed research papers. The "OpenConf" conference management system made our job easy by allowing us to reach the authors and reviewers without much hazel.

The selected reviewers are a very busy community. Anyone who has gone through a rigorous postgraduate programme would agree that those are the busiest days in life. Most of our reviewers are in the final stages of their Ph Ds, yet they all had time and energy to respond to our request for reviewing the work for their junior colleagues and sometimes even went beyond what were requested. The editorial committee is very grateful to all the reviewers for their commitment.

All the authors who submitted papers were our strength. If we rejected your paper, do not worry, the feedback you got would help you do better. While congratulating the authors of the selected papers we hope that you will continue to publish, taking the CSE flag to every international fora. Many of the work presented here is from the final year undergraduate projects carried out at CSE. The relentless work by the Project Coordinator, our colleague Mr Shantha Fernando has helped CSE improve on the quality of the projects over the years. This proceeding is a tribute to Mr Fernando and his team of project supervisors from CSE and the local IT industry.

Last but not least the editorial committee worked very hard to make this a reality. Our sincere gratitude goes to all the colleagues and students of the editorial committee. The dividends of all their hard work will come from you learning something and enjoying the work presented here.

Vishaka Nanayakkara - Co-chair and Co-editor, CS&ES Conference 2009

Hiran Ganegedara - Co-chair, CS&ES Conference 2009

Upuli Pushpika Gunasinghe - Co-editor, CS&ES Conference 2009

SPONSORS OF CS&ES CONFERENCE, AGM AND GET TOGETHER 2009

Strategic Partner



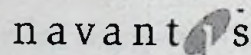
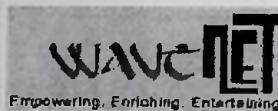
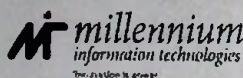
Platinum Sponsor



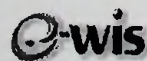
Gold Sponsors



Silver Sponsors



Bronze Sponsors



Media Partners



CONTENTS

TITLE/AUTHOR	PAGE
1. Optimizing Web Services Security Processing Models <i>I.E. Suriarachchi and N.S. Mihindukulasooriya</i>	1
2. AIEPmora an NLP Knowledge Representation and Retrieval Platform <i>A.I Maha Arachchi, A.M.S.S.A.U.B Attanayake, G.L.L Phillips and S. Vithanagama</i>	7
3. KB Context Switching Algorithm for NLP <i>A.M.S.S.A.U.B Attanayake</i>	15
4. A Faster Image Registration and Stitching Algorithm <i>N. Senarathne, S. Ransiri, A. Balasooriya, P. Arangala, C.R. De Silva and P. Samarakoon</i>	19
5. Programmatic Implementation of the Karmarkar's Algorithm for Vacation Package Synthesis Process Optimization <i>H.Ganepola, J. Padukka, R. Prasad, L. Samarakoon and K. Wimalawarne</i>	27
6. Strategic Factors Enabling Effective Offshore Relationships; A Model from the Vendor Perspective <i>I.D.P.M. De Zoysa and N.D. Gunawardena</i>	35
7. Multi Agent System for Energy Management <i>W.D.N. Fernando, K. D. Dhanuka Lakmal Kodikara, Piyasena T.T.S, Randana G.A.R and K. Wimalawarne</i>	49
8. Autonomous Event Driven Architectures upon Service Oriented Architectures <i>T. S. L. Fernando, W. W. M. E. P. Gunetileke, H. Halgaswatta, S. Weerawarana, P. Fremantle and I. Perera</i>	59
9. Practical Benefits of Using Complex Event Processing in a Service Oriented Architecture <i>T. S.L. Fernando, W.W.M.E.P. Gunetileke, H. Halgaswatta, S. Weerawarana, P. Fremantle and I. Perera</i>	65
10. Enhancement Module for MOINC High Performance Grid Computing Framework for Web Services <i>R.I.A. Senadheera, D.P. Senarathne, C.K. Wimalasena and I. Perera</i>	77
11. The Future Web Services: A Fusion of Web Services, Grid Computing and Volunteer Computing <i>H. Jayathilaka, A. Dassanayake, E. Angunawala and D. Boteju</i>	83

12. Efficient High Performance Computing Framework for Short Rate Models 91
H.Ganepola, J. Padukka, R. Prasad, L. Samarakoon and K. Wimalawarne
13. MjoY – Common Platform for Mobile Ticketing 97
A.S.K. Fernando, K.A.P.H. Gunathathna, K.A. Lakmini, M.M.D. Perera and D.E.W.V. Nanayakkara
14. MOINC Agent, Dynamic Web Service Runtime Environment 103
N.T. Baranasuriya, M.B.R.C. Boralugoda and M.S.M.A. Nafran
15. IVR Flow Designer and Simulator 111
A.Y. De Jonk , H.M.S.C. Jayasinghe, M.T.M. Mujahid, W.C.M. Silva, I. Perera and W. Gajanayake
16. LBNEST - Layout Based News Extraction and Syndication 115
S. Fernando, A.S. Perera, K. Wimalawarne, T. Buddhika, V. Kahawala, P. Fonseka and T. Karunanayake
17. Prophetia: Artificial Intelligence for TravelBox® Technology 125
B.B.A Geethal, R.C. Gunasekara, M. Hassan, C.D.T. Mathew, A.S. Perera, H. Subasinghe, Y. Welikala and L. Wimalasena
18. Versatile Privacy Preserving Electronic Identity Framework 133
B. A. Malalasena, S. Nimalaprakasan, S. Ramanan, K. Shayanthan, C. Gamage and M. S. D. Fernando