

EDITORIAL COMMITTEE

Brig ALDM Gunasekara RSP USP psc

Mr. MM Jayawardena

Prof Sujeewa Amarasena

Brig GRH Dias USP psc IG

Mr. WS Wijesinghe

Ms. DD Lokuge

Mr. H.W. Nuwan Herath

Ms. Mahesha Jayawardana

Ms. Erandi Kithulgoda

Dr. Isurujith K Liyanage

TABLE OF CONTENTS

Content	Page
Forward	01
Welcome Speech <i>Major General Milinda Peiris Vice Chancellor, General Sir John Kotelawala Defence Univerity (KDU)</i>	04
Keynote Address <i>Hon. Prof. GL Peiris, Minister for Foreign Affairs, Sri Lanka</i>	08
Executive Summary	19
Defence – Plenary Session	
<i>Summary</i>	28
Introductory Note <i>Mr. Gotabaya Rajapaksa, Secretary to the Ministry of Defence</i>	30
Post War LTTE Structure: The Threat and Response <i>Prof. Rohan Gunaratna</i>	33
Integration of Armed Forces into Development Efforts of Post-Conflict Sri Lanka <i>Maj. Gen. (Retd.) GA Chandrasiri, Governor of the Northern Province, Sri Lanka</i>	39
Role of Armed Forces in the Post Conflict Scenario in Regional Experience: Pakistan <i>Major General Javid Iqbal Ramday</i>	42
Role of Armed Forces in Post–Conflict Sri Lanka: Lessons for Sri Lanka <i>Alan I Hatcher</i>	49
The Role of Armed Forces in Post-Conflict Sri Lanka: Lessons Learned from a Global Perspective <i>Mara E Karline</i>	62
Defence - Technical Session I	
<i>Summary</i>	75
Defence – Technical Session II	
<i>Summary</i>	78
Rehabilitation of Child Soldiers in Post-Conflict Situation in Sri Lanka <i>U.A.T. Udayanganie, Probationary Lecturer, Faculty of Law</i>	81

GIS Modeling with Rapidly Changing Data Sets: Application of Model Builder to Assess Public Accessibility in Colombo City	90
<i>Lt. Col. S D Udayasena RSP , SL Army, Professor N.T. Sohan Wijesekera Department of Civil Engineering, University of Moratuwa</i>	

Defence - Technical Session III

<i>Summary</i>	110
Maritime Threats and Maritime Security: Way Ahead for Sri Lanka	113
<i>Rear Admiral Jayanath Colombage RSP, VSV, USP, rcds, psc, MSc (DS), MA (IS), DISS(USA), Dip in IR, Dip in CR, Dip in IT Commander Eastern Naval Area, Sri Lanka Navy</i>	
Strategic Alliances within the Indian Region to Deter Maritime Conflicts that May Arise from Islands and Chokepoints	122
<i>Commodore JJ Ranainghe, psc, Msc (DS) Mgt, PgD CPS, Dip in CR, JP (whole island) Sri Lanka Navy</i>	
Emerging Geopolitics: Placing Sri Lanka in the Indian Ocean Geopolitical Rivalry	138
<i>Prabha Jayasinghe Department of Geography, University of Peradeniya, Sri Lanka</i>	
How Sri Lanka Navy can Assist in Eradicating Maritime Piracy in Post Conflict Scenario	148
<i>Rohan Joseph RSP, psc, BSc (DS) Hons Lieutenant Commander (ND)</i>	

Humanities, International Relations and Law - Plenary Session

<i>Summary</i>	159
Constitutional Reforms in Post Conflict Sri Lanka: A Prospective Analysis of Sri Lanka's Constitutional Change	160
<i>Mr. Gomin Dayasiri, Attorney at Law</i>	
Constitutional Reforms in Post Conflict Sri Lanka: Problems and Issues	166
<i>Mr. Mohan Peiris, Attorney General</i>	

Humanities, International Relations and Law - Technical Session I

<i>Summary</i>	174
An Efficient and Paperless Property Transactions Model for Sri Lanka	176
<i>Kumudumalee Munasinghe, Department of Law, Faculty of Law, KDU</i>	
A Study on Students' Errors on Word Problems	187
<i>T.Mukunthan Dept. Early Childhood and Primary Education, Open University</i>	

Humanities, International Relations and Law –Technical Session II

<i>Summary</i>	197
Human Rights Perspective in Preventive Detention and Rehabilitation in the Post War Situation: Sri Lanka's Standpoint and Achievements <i>M.A.D.S.J.S. Niriella, Faculty of Law, University of Colombo</i>	199
A Study on Relationships between Sri Lanka-China and Pakistan <i>Mobisher Rabbani</i>	214
Towards a Policy of Social Integration in Sri Lanka <i>Dayani Panagoda, National Technical Advisor, Facilitating Initiatives for Social Cohesion and Transformation (FLICT)</i>	219
Education as a Tool of Ethnic Integration: Are We Successful? <i>Harsha D. Wijesekera, Department of Languages, KDU</i>	231

Humanities, International Relations, and Law - Technical Session III

<i>Summary</i>	248
Pedagogical Inputs in Promoting Extensive Reading in English among Post-Primary Schoolchildren from the Conflict-Affected Territories of Sri Lanka <i>E.A. Gamini Fonseka, Senior Lecturer in English, University of Ruhuna</i>	250
Develop a Digitized Phoneme to Grapheme Conversion Model for Sinhala Language <i>P.H.V.R. Karunananda, Institute of Human Resource Advancement, University of Colombo</i>	260
Free and Systematic Variation in Second Language Learners' Writings <i>Chamila Kothalawala, Department of Languages, KDU</i>	272

Social Sciences - Plenary Session

<i>Summary</i>	281
Social Integration and Economic Development <i>Dr. Ranjith Bandara</i>	283
Attitudinal Changes as a Necessary Condition for National Level Social Integration in Sri Lanka <i>Prof. Shantha Hennanayake</i>	286

Social Sciences - Technical Session I

<i>Summary</i>	293
----------------	-----

System Approach as a Policy Guideline for National Defence in Sri Lanka <i>MM Jayawardena Department of Social Sciences, KDU</i>	294
---	-----

Social Sciences - Technical Session II

<i>Summary</i>	307
A Preliminary Investigation into the Impact of Rainfall on One Day International (ODI) Match Scheduling and Cancellations in Sri Lanka (1982-2010) <i>SK Mohamed Ali and RK Chaminda Kumara Department of Geography, University of Ruhuna</i>	308

Social Sciences – Technical Session III

<i>Summary</i>	318
Mainstreaming Agro Biodiversity to Improve Nutrition Security and Livelihoods: A Marketing Approach for Under-utilized Plant Species in Sri Lanka <i>UK. Jayasinghe Mudalige, SM M Ikram, JMM. Udugama, RS Ratnayake and G Gamage</i>	319

Engineering and Other Technical Sciences - Plenary Session

<i>Summary</i>	331
Information Technology as a Tool for Modern Development <i>Mr Lalith Weerathunga, Secretary to HE, the President Mahinda Rajapaksa</i>	333
Problems and Prospects of Information Technology with Special Reference to Sri Lanka <i>Dr. Ajith Pasqual, Department of Telecommunication, University of Moratuwa</i>	338
Role of Telecommunication in the Acceleration of Economic Growth in Sri Lanka <i>Prof. Mrs. Dileeka Dias</i>	342
Role of Engineering and Technical Sciences in the Acceleration of Economic Growth in Sri Lanka <i>Prof. Ananda KW Jayawardane, Senior Professor in Civil Engineering, University of Moratuwa, NDB Bank Endowed Professor in Entrepreneurship, President, Institution of Engineers</i>	351

Engineering and other Technical Sciences - Technical Session I

<i>Summary</i>	363
Synthesis and Characterization of Hydroxyapatite to be Used as a Bio-Material <i>SU Adikary, JMN Jayaweera, and GA Sewvandi Department of Materials Science and Engineering, University of Moratuwa</i>	365

Use of Bio Diesel in Sri Lanka Army 373
Lt Col Chandana Weerakoon, Central Bank of Sri Lanka

Precision Investment Casting of Aluminium Machine Parts Using Specially
 Designed Ceramic Mould 381
*PPSS Pussepitiya, SU Adikary, U Gunawardena, Department of Mechanical
 Engineering, KDU, Department of Materials Science and Engineering, University
 of Moratuwa*

Effect of Gypsum on Compressive Strength of Cement 388
KBK Sanjeewa, HNM Bandara, TS Amarawansa

Engineering and Other Technical Sciences - Technical Session II

Summary 398

Network Based Distributed Intelligent Intrusion Detecting System 399
RK. Ahmadh Rifai Kariapper, Sabaragamuwa University

Engineering and Other Technical Sciences - Technical Session III

Summary 407

Statistical Control of Process Parameters of Machining Operations for Enhanced
 Quality and Process Economy 408
*G.D.S.Desinghe, NKBMP Nanayakkara, Department of Production Engineering,
 Faculty of Engineering, University of Peradeniya*

A Mathematical Model for Designing a Sensor for Salinity Measurements in Solar
 Ponds 417
*US Rahubadda, PAA Perera, Department of Electrical and Electronic Engineering,
 KDU, Department of Physics, University of Kelaniya*

Potential Use of Biogas as an Alternative Energy Source: Case Study at Kotelawela
 Defence University 426
*P Jayasuriya and Ranjith B. Mapa Department of Marine Engineering and Sciences,
 KDU, Department of Soil Science, Faculty of Agriculture, University of Peradeniya*

Medicine – Plenary Session

Summary 434

Role of Health Service in Economic Development 436
Professor Nimal Attanayake, Department of Economics, University of Colombo

Medical Ethics: Some Concepts, Issues and Trends 430
*Prof. Susirith Mendis, Vice-Chancellor, University of Ruhuna & Senior Professor
 of Physiology, Faculty of Medicine*

Medicine – Technical Session I

<i>Summary</i>	444
Association of Chronic Pain in Neck and Lower Back with Degenerative Changes in Cervical and Lumbar Spines in Service Personnel: A Case Series. <i>Col (Dr) P T R Makuloluwa, Consultant Anesthetist, Military Hospital, Colombo, Senior Lecturer in Physiology</i>	447
Effective Reduction of Sugar, Oil and Salt Consumption Cause Reduced Prevalence of Heart Diseases and Type 2 Diabetes among RNR Naval Persons, Sri Lanka: Retrospective study <i>Dr. Sherman Fernando [MD, MRCP] and Surg. Lt. Commander HDI Samarawickrama</i>	452

Medicine – Technical Session II

<i>Summary</i>	457
Astigmatism in School Children of Southern Sri Lanka <i>Prof. Saman Wimalasundera MBBS, DO, PhD Department of Community Medicine, Faculty of Medicine, Galle</i>	460
Prevalence of Chlamydial Infection among Infertile Males and Females and Association of Chlamydial Infection and Auto Sperm Antibody (ASA-IGG) in Males <i>Lt Col (Dr) HHLK Fernando, Prof. TR Weerasooriya, Reproductive Biology Laboratory, Faculty of Medicine, Galle</i>	462
Challenges and Issues in Health Sector Developments in Post Conflict Scenario in Northern Province – A Case Study <i>Dr.Safras, A.S.A. and Dr. Ranasinghe</i>	469
Post Conflict Contraceptive Needs of the Internally Displaced Women <i>Dr.S.Prathapan, Dr.R.Prathapan, Dr.SR.Jude, Mr.G.Suthananthan, Dr. WAA. Wijeyasiri</i>	480

Medicine – Technical Session III

<i>Summary</i>	487
Amino-Terminal Acetyl Group of Tropomyosin is a Major Determinant of Thin Filament Assembly, which Regulates Muscle Contraction <i>Dr. Charitha Goonasekara, Faculty of Medicine, KDU</i>	489
A Comparison of Some Sri Lankan Medicinal Plant Extracts on <i>In Vitro</i> Radical Scavenging Activity <i>Dr. AP Attanayake, Dr. KAPW Jayatilake, Department of Biochemistry, Faculty of Medicine, University of Ruhuna</i>	499