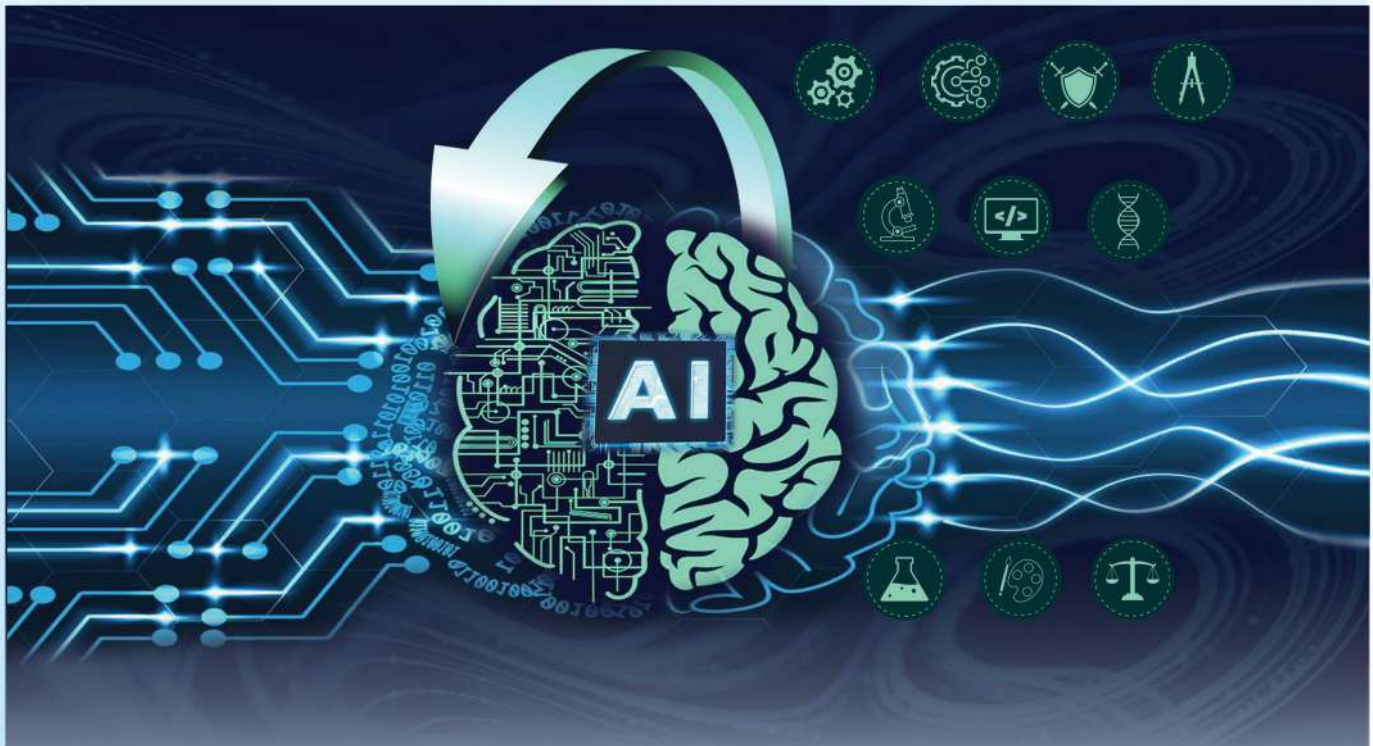




17th INTERNATIONAL RESEARCH CONFERENCE

*Unravelling the Paradigm Shift:
Revolutions in the Era of AI*

26th - 27th SEPTEMBER 2024



DEFENCE AND STRATEGIC STUDIES

ABSTRACTS

General Sir John Kotelawala Defence University



17th INTERNATIONAL RESEARCH CONFERENCE

UNRAVELLING THE PARADIGM SHIFT: REVOLUTIONS IN THE ERA OF AI

DEFENCE AND STRATEGIC STUDIES

ABSTRACTS



General Sir John Kotelawala Defence University
Ratmalana, Sri Lanka.

KDU PRESS

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Message from the Chief Guest



I am truly honoured to welcome all the distinguished participants to the 17th International Research Conference (IRC) at General Sir John Kotelawala Defence University (KDU). This annually organized conference serves as a unique milestone showcasing the rich research culture deeply embedded within KDU. As a prestigious seat of learning, novelty and innovation remain at the heart of KDU's mission. Therefore, 'Unravelling the Paradigm Shift: Revolutions in the Era of AI' has been chosen as the key theme of IRC 2024.

Moving ahead with the momentum of modern-day research, we are set to uncover the extensive impacts of artificial intelligence, not just in defence but across every facet of national interest. Currently, AI has become a driving force, reforming our defence strategies, transforming healthcare, and restructuring our educational frameworks and infrastructure.

Investing in research is essential for national advancement, promoting innovation, formulating policies, and offering solutions that address our most pressing challenges. Hence, the IRC serves as a vital platform that fosters such great endeavours, contributing significantly to national development. Our responsibility as defenders of national security is profound, extending beyond traditional roles to include the ethical integration of advanced technologies that ensure our nation's safety and prosperity.

KDU stands as a symbol of a rich and diverse research culture across many disciplines. It is also a hub for high-quality research, upholding international standards of academic excellence. This conference represents a critical meeting of minds where leading experts converge to define strategies for our future. Each discussion and presentation at this event is a step toward securing a thriving, prosperous future for our region.

I extend my best wishes to all for a successful and productive conference, eagerly anticipating the innovative ideas and transformative insights that will undoubtedly arise.

**GENERAL SHS KOTTEGODA (Retd) WWV RWP RSP
VSV USP ndc**
Chancellor General Sir John Kotelawala Defence University

Message from the Keynote Speaker



Brain health is a holistic concept encompassing cognitive, sensory, social-emotional, behavioural, and motor functions, enabling individuals to achieve their full potential. With one in three people globally affected by a brain disorder, the urgency for preventive brain health initiatives is evident. Since the inception of World Brain Day in 2014, there has been a renewed global focus on this critical area. The World Federation of Neurology (WFN), in collaboration with key organizations such as the American Academy of Neurology (AAN), the European Academy of Neurology (EAN), and the Asian Regional Consortium of Headaches (ARCH), has led the charge to raise awareness and promote brain health worldwide.

This keynote address will outline the journey of World Brain Day and its impact on the global brain health movement, with a specific focus on prevention. It will explore the evolution of brain health concepts and the alarming prevalence of brain disorders, emphasizing the need for urgent, coordinated action. Central to this effort is the role of artificial intelligence (AI) in enhancing preventive brain health strategies. AI-driven technologies are increasingly being used to predict, diagnose, and monitor brain health conditions, enabling earlier interventions and more personalized approaches to prevention.

The address will highlight the author's pioneering work in community-based programs, public health campaigns, and international collaborations. It will underscore the critical role of prevention, early intervention, and AI-powered tools in improving quality of life and reducing the global burden of brain disorders. The ultimate goal is to advance comprehensive brain health initiatives that leverage cutting-edge technologies to ensure a healthier future for all.

Professor Tissa Wijeratne

DR OAM MD PhD FRACP FRCP(London) FRCP (Edin) FAAN (USA)
FEAN (EAN) Professor and Chair, Director, Senior Neurologist,
Department of Neurology, Western Health, Victoria, Australia Co-
Founder and Co-Chair, World Brain Day, World Federation of
Neurology

Message from the Vice-Chancellor



Greetings to all participants, speakers, and guests of the 17th International Research Conference (IRC) at KDU. This year's IRC is centered around a timely theme that has sparked diverse dialogues in the realms of research and innovation. The theme, 'Unravelling the Paradigm Shift: Revolutions in the Era of AI', serves as an eye-opener for both eminent and novice researchers across the globe. It also highlights the critical role that advanced technologies play in shaping our world.

At KDU, we take pride in being at the forefront of defence education in Asia, a distinction affirmed by our high rankings and our pivotal role in shaping global security dialogues. KDU claims to have a unique history of providing high-quality education for both military and civilian students. It also proudly stands as a thriving hub for cutting-edge research that addresses pressing global and national issues. We strongly believe in fostering a rich and diverse research culture among KDU's students and staff, aligned with international standards. Therefore, IRC is recognized as a key event in KDU's annual calendar, emphasizing its significance in the institution's academic and research endeavours.

This year, we aim to explore the revolutionary impacts of AI across diverse disciplines, reaffirming our commitment to leading these discussions on a global scale. The insights shared here will undoubtedly spark new research initiatives and strategic collaborations, enhancing Sri Lanka's stature as a leader in both academic and strategic domains.

I extend my sincere gratitude to all those whose collective efforts have brought this conference to a reality. Your contributions ensure that KDU plays a prominent role in the international arena, driving discussions that will shape the future of technology and strategy. I look forward to a successful event, characterized by insightful discussions and pioneering ideas.

**REAR ADMIRAL HGU DAMMIKA KUMARA, VSV,
USP, psc, MMaritimePol, BSc (DS)**
Vice Chancellor General Sir John Kotelawala Defence University

Message from the Chairperson



It is my honour, as the Chairperson, to welcome you all to the 17th International Research Conference at KDU. This year, we explore how artificial intelligence has evolved from a technological innovation into a catalyst for transformative change across numerous sectors. With an impressive selection of 441 research papers, drawn from nearly 1000 submissions, our conference spans across 11 distinct tracks covering a wide range of disciplines. Our theme, “Unravelling the Paradigm Shift: Revolutions in the Era of AI,” highlights the profound and far-reaching transformations that AI is driving—from reshaping urban infrastructure to revolutionizing healthcare. The conference is designed to promote interdisciplinary dialogue, addressing not only technological advancements but also the ethical, social, and economic implications of these developments. One of our key objectives is to create a platform where researchers, professionals, and thought leaders can come together, exchange ideas, and foster collaborative initiatives that will push the boundaries of innovation. I am deeply grateful to all our keynote speaker and the plenary speakers, other presenters, , participants, and the entire organizing team for their tireless efforts and contributions. Your dedication to advancing knowledge is what brings this conference to life, positioning it as a critical forum in global research. Together, we are charting a path toward a future where technology and society grow hand in hand, reshaping the landscape of not just research but our daily lives. Let’s engage in meaningful discussions that will inspire new perspectives and drive impactful solutions. Here’s to a successful conference, rich in insight and collaboration. Finally, I would like to extend my best wishes to all the presenters, authors, and participants joining the KDU IRC 2024, whether on-site or online. I hope each of you finds this conference not only informative and enjoyable but also an encouraging opportunity to experience the warm hospitality of KDU throughout these two fruitful days.

Dr. Nirosha Wedasinghe

Ph.D(KDU-SL), MIT(CStud-Aus),B.Sc in Comp IS (London Met-UK), SMIEEE(US), MBSC(UK), MCS(SL), FISDS(Japan) Senior Lecturer cum Director -Centre for Gender Equity and Equality General Sir John Kotelawala Defence University Conference Chair-IRC 2024

Message from the Secretary



As we gather for the 17th International Research Conference at KDU, I extend a warm and heartfelt welcome to all participants, researchers, and thought leaders. This year, we proudly present 441 research papers selected from nearly 1,000 submissions, spanning across 11 tracks in diverse fields such as Defence and Strategic Studies, Medicine, Health Sciences, Engineering, Technology and Computing, Basic sciences, Law, Social Sciences and Humanities, and the Built Environment and Spatial Sciences. Our theme, “Unravelling the Paradigm Shift: Revolutions in the Era of AI,” reflects the profound ways that AI is transforming our world, becoming integral to our lives and work. The discussions here aim to explore how AI can address global challenges, drive innovation, and foster interdisciplinary collaborations that will shape the future. Looking ahead, the future of IRC lies in broadening its horizons. We aim to increase international participation, diversify the scope of research, and establish global research consortia to tackle real-world problems that extend beyond the borders of Sri Lanka. The insights gained here must lead to actionable outcomes, particularly in formulating policy recommendations in areas such as AI in defence, public health, and education. This conference is more than just a forum for discussion; it is a platform where the brightest minds collaborate to drive change. I extend my heartfelt thanks to all our speakers and participants for their dedication and contributions. Together, we are not only shaping the future of research but also crafting solutions that will impact society on a global scale. Here’s to a successful and inspiring conference that drives innovation, shapes policy, and sparks meaningful collaboration.

Dr. HM Prasanna Herath

Ph.D. (USJ), RN(SLNC), B.Sc(Nursing) Hons (UPSL), CTHE Senior Lecturer Faculty of Allied Health Sciences Erasmus coordinator General Sir John Kotelawala Defence University Conference Secretary- IRC 2024

Message from the Dean



It is with great pride that I address you on the occasion of the 17th International Research Conference (IRC) at General Sir John Kotelawala Defence University (KDU). This year's conference, themed "Unravelling the Paradigm Shift: Revolutions in the Era of AI", marks a pivotal moment in our collective understanding of the transformative power of artificial intelligence and its impact across various sectors. As we navigate through the 21st century, AI is reshaping the global landscape, presenting new opportunities and challenges for governance, defense, economy, and society at large. The theme of this year's conference reflects the revolutionary changes brought about by AI in diverse fields, highlighting the need to adapt to and harness its potential to build more resilient systems. As AI technologies continue to evolve, they are driving innovation in sectors such as defense, healthcare, education, and business, demanding that we rethink traditional models of operation and strategy. This paradigm shift calls for interdisciplinary research and collaboration to address complex issues of ethics, security, and sustainability that come with the rise of AI. As a developing nation, Sri Lanka stands at the crossroads of this technological revolution, where AI offers unprecedented opportunities to advance national security, economic development, and social welfare. The 17th IRC provides a timely platform for academics, researchers, and professionals to explore the diverse impacts of AI and share their insights on how to navigate this evolving landscape. It is essential that the research community comes together to develop data-driven solutions that address both the opportunities and risks posed by AI in the defense and strategic domains, as well as in broader societal contexts. I commend the organizing committee for their dedication in bringing together this prestigious event, which continues to uphold KDU's commitment to fostering research excellence and innovation. I hope that this year's conference will inspire fruitful discussions, collaborative ventures, and groundbreaking research that will help shape a future where AI contributes to the resilience and progress of our nation. Wishing all presenters, participants, and attendees a successful and intellectually stimulating experience over the course of this event.

AHR HASANTHA RSP psc

BA (Def Studies), PG Dip in IR Dean, Faculty of Defence and Strategic Studies General Sir John Kotelawala Defence University

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ORAL PRESENTATIONS

Islamic State Exploitation of Emerging Web3 and Generative AI Technologies

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Islamic State, being a nefarious global terrorist organization, has showcased its exploitation and adaptability of various online technologies throughout the history. This research investigates its evolving Web3 and Generative AI exploitation tactics by using exploratory qualitative content analysis of discussions on IS friendly communication platforms, websites and online whistle-blowers then triangulated with recognized secondary resources. Pro-IS online entities demonstrate a concerning ability and interest to adapt and exploit emerging technologies like Web3 technologies (including decentralized communication, hosting, finance, and Metaverse) and Artificial Intelligence (including AI-generated videos, voice cloning, AI images and chatbots) for experimenting new tactics for propaganda, recruitment, and fundraising by evading extreme counter terrorism content moderation and detection mechanisms. It was observed that decentralized chat platforms and cryptocurrency are widely used by pro-IS entities while exploitation of decentralized web and virtual platforms were also susceptible for exploitation. There is a wide use of AI generated images, and textual contents. Exploiting AI audio-visuals and AI chatbots are still on experimental phase but possess an alarming threat. The global threat implied by these exploitations cannot be negated hence early counter terrorism actions must be taken to mitigate this emerging threats. These findings highlight the urgent need for a multi-stakeholder approach to counter this threat. Collaboration between tech companies, governments, counterterrorism agencies and international organizations is crucial to keep emerging online technologies to be safe from terrorist exploitations.

Keywords: *Web3, Generative AI, Islamic State*

Maritime Strategic Thinking Culture of Small Island States: Sri Lankan Perspective

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This paper attempts to identify the reasoning behind the theoretical and philosophical comprehension of maritime strategies in small-state studies within the Indian Ocean Region (IOR). Understanding the philosophical significance of maritime strategy is crucial for a nation to develop its own distinct strategy. As a small island state in the region, Sri Lanka is exposed to transnational maritime threats and challenges. To confront these diverse challenges in the maritime domain, states must formulate their own distinct maritime strategy by conducting analyses of geopolitical factors, maritime security risks, and economic considerations. The ancient philosophical tenets that have influenced the maritime strategies of civilizations cannot be overlooked. They have shaped states' decisions, reflecting their individual cultures and historical contexts. This knowledge is passed down through generations, and as a small state, Sri Lanka must integrate this knowledge into the process of formulating a maritime strategy and instill it within the state's strategic culture. The present research methods encompass both descriptive and analytical facets. The study acquired primary data through interviews and secondary data primarily from books and journals. The research reveals that Sri Lanka currently lacks a robust maritime strategy. Observations have identified an absence of cohesive functionalism in the formulation process of a maritime strategy. It is crucial to incorporate these theoretical and philosophical comprehensions of military and maritime warfare and strategic thinking in the development of maritime policies for Sri Lanka's maritime strategic culture.

Keywords: *maritime strategic culture, maritime challenges, small states security*

Assessing the Impact of Cryptocurrency on Counter-Terrorism Strategies in Sri Lanka

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This study is focused on the analysis and impact of cryptocurrency on military strategies with special attention towards counter-terrorism strategies. While this dual technology is being developed, various authorities have been forced to set regulations, given the expansive growth of cryptocurrency over the years. Country perspectives vary in opinion on cryptocurrency, as a potential means for illegal activities such as money laundering, terrorism, and other organized crimes. Cryptocurrency is favourable due to their trade speed, cost, and security specially for terrorism finance. The total market cap peaked at more than \$2 trillion on November 4th, 2021, with up to 7, 616 cryptocurrency, according to sources. There are instances where cybercriminals made hostages extort payment in terms of Cryptocurrency. This high demand for crypto in the crime world emerged as a significant concern for bankers and governors, with criminals exploiting digital financial services to perpetrate money laundering and other types of crimes. Counterterrorism finance (CTF) efforts often focus on tracking money and preventing financial transactions that might be used to support attacks and other terrorist activities. However, the success of these strategies in reducing terrorist access to official currencies has raised concerns that terrorist organizations might increase their use of such digital cryptocurrency as Bitcoin to support their activities. Sri Lanka, with its unique geopolitical landscape and ongoing military concerns, presents an intriguing case for investigating the implications of cryptocurrency adoption within its military context. This research proposal aims to assess how the integration of cryptocurrency affects CT strategies in Sri Lanka.

Keywords: *cryptocurrency, military strategies, international relations, dual technology, economy, finance*

The Red Sea Area: Importance, Regional Conflicts and Impact on Sri Lankan Trade and Security

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One of the most vital maritime corridors which has shown considerable importance for global trade is the Red Sea. Due to existing threat in the region major powers made their footholds in nearby Bab-El-Mandeb at the Red Sea. Houthi rebels in Yemen targeting ships aligned with Israel leading to significant delays in trade has resulted in countries finding alternate trade routes. With the emergence of artificial intelligence, there is also the concern of using this technology in warfare within the region, but such advanced technology utilized effectively can be also used to mitigate difficulties facing the country as well. The red sea being a vital trade route for countries like Sri Lanka there is the high risk of it significantly impacting the countries trade and security, if any hinderance to its trade routes were to occur, it will incur extra cost for the country with the increase in prices due to additional insurance premiums, container freight rates and the additional fuel that is needed for the safe and secure travel of the countries imports and exports affecting trade and the economic stability of the country. Ensuring the safety and security of international trade routes such as the one in the red sea is necessary for the county's financial stability and certain steps must be enacted to ensure the nation's safety and security as well. In this study, the research aim to analyse these impacts and outcomes of the difficulties which plague the red sea to Sri Lankas own national security and its impact on trade and present possible solutions and mitigation strategies for policy makers and the Sri Lankan government to enforce and implement, which may allow Sri Lanka to face potential threats and maritime security concerns and its affects in trade within the country. This research takes the form of a qualitative study which uses both primary and secondary sources.

Keywords: *Geopolitical Tensions, Bab-El-Mandeb Strait, Artificial Intelligence, Maritime Security*

Misinformation in an Era of Artificial Intelligence: Analysis on Global Security

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Every decade has its own technical landmarks, such as the debut of personal computers in the 1970s, the World Wide Web in the 1990s, and smartphones and social media in the 2000s. Similarly, the decade of 2020- 2030 represents a significant development and application of Artificial Intelligence (AI) technology in human life and most of the aspects that surround it. These applications have reached critical areas such as economics, education, healthcare, and aesthetics, even though the decade has not reached its halfway point. AI technology has a wide range of effects on humans and their societies, both beneficial and harmful. Misinformation, for example, is a widely acknowledged hazard that could be generated by AI-powered platforms. This research focuses on defining misinformation in an era of AI, identifying misinformation generated through AI, and analysing the effects of misinformation generated by AI on global security. A qualitative analysis was utilized to develop the study. In gathering data, both primary and secondary sources were used. A comprehensive analysis of the AI tools that are widely available around the globe was done. During the analysis AI AI-generated information and responses were cross-referenced with credible sources to check their accuracy and reliability including a survey to test the effects of AI-generated misinformation among a group of people.

Keywords: *misinformation, artificial intelligence, AI tools, global security.*

AI and Human Rights: Safeguarding Civil Liberties in Sri Lanka Whilst Focusing National Security

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This paper explores the intersection of Artificial Intelligence (AI) and human rights within the context of national security in Sri Lanka, focusing on the delicate balance between safeguarding civil liberties and enhancing state security. As AI technologies become increasingly integrated into security and law enforcement practices, concerns about the potential erosion of privacy, freedom of expression, and due process have grown. The paper suggests that Sri Lanka must establish robust legal frameworks, ethical guidelines, and oversight mechanisms to ensure AI's positive contribution to national security without compromising human rights. Furthermore, it emphasizes the importance of public engagement and international cooperation in developing AI governance models that respect fundamental rights. By addressing these concerns, Sri Lanka can better navigate the complexities of AI integration, maintaining public trust and upholding democratic values. Legal experts have recognized the swift and unfettered progress of Artificial Intelligence which brings consequences to society. The imitation of human intelligence progressions by machines has turned out to be a vital area in the enduring global industrial revolution in AI specifically in the area of Information Technology (IT). It has created opportunities and vulnerabilities in society across the globe which have not been sufficiently investigated up to date in Sri Lanka. This paper reviews existing legislation, policies, and legal regulations of AI in Sri Lanka with contemporary constitutional proposals to sort the elucidations to protect AI status and to examine the encounters of AI in the legal field. Inadequate AI infrastructure exists in the nation's legal institutions making it difficult to provide initial suggestions for the creation of laws on AI's position as an independent legal entity. Policy recommendations include implementing faster programmes to address the country's existing AI deficiencies. Awareness programs would be beneficial at the outset addressing all key layers of the country's legal system. Some basic components should be included in the school curriculum to raise awareness of the ramifications of AI on the country's legal system. Sufficient public funds should be provided with appropriate planning horizons in this activity, and they can be utilized to draft national legislation and conduct additional research on the legal implications of AI.

Keywords: *artificial intelligence, legal system, information technology, civil liberties, legal frameworks*

Differences in Perceptions in Three Ethnic Groups about the Predicted Impacts of the Rise of Mono-Ethnic Nationalism in Post-war Sri Lanka a

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Mono-ethnic nationalism is a form of nationalism that advocates for the political unity and cultural homogeneity of a nation defined by a single ethnic group. In such a context, ethnicities recognize only their own group's existence within a region. Sri Lanka is a multi-ethnic society consisting primarily of Sinhalese, with minorities including Tamils, Muslims, and Burghers. Although the precise origin of this ethnic division is difficult to pinpoint, it appears to be longstanding, dating back to the British era. In the post-independence period, this division intensified, leading to increasing polarization between Sinhalese and Tamil identities, nearly creating warring factions. After three decades of conflict, Sri Lankan society has displayed new dynamics in inter-ethnic relationships among Sinhalese, Tamils, and Muslims. These groups have attempted to assert their distinct cultural values and identities, rather than uniting under a single Sri Lankan nationality. This fragmentation has led to a lack of interaction, communication, and understanding, resulting in several clashes between ethnicities over the past decade. This research fills a gap by investigating how perceptions of mono-ethnic nationalism differ among these three ethnic groups, particularly from their ethnic perspectives. It examines the potential social, economic, and political effects of this phenomenon. Data were collected using qualitative methods, with a sample of 15 respondents from each ethnic group, and interviews were conducted as the primary data collection method. Data analysis was performed by the researcher following data collection using thematic analysis method.

Keywords: *mono ethnic nationalism, three ethnic groups, post war Sri Lanka, predicted impact*

Challenges on Post-Harvest Management of Sri Lankan Multi-Day Fishing Boats and Their Implications on the National Security of the Country

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This study focused on the identification of factors leading to issues of post-harvest management of MDFB and its implication on the national security of the country. In particular, the study focused on identifying the knowledge gap of the affected community regarding the government-introduced advanced fish preservation RSW or CSW system under the regulation of the high seas. The second objective was to examine the facilities the government and other related stakeholders provided for installing the RSW or CSW system. The third objective was to explore why fishermen still depend on icing even though new technology has been introduced while they are facing considerable post-harvest losses and how those post-harvest losses affect the national security of the country. The final objective was to provide recommendations for improving post-harvest management of multiday fishing trawlers in order to strengthen national security. Importantly, the study has found that the main issue for the post-harvest losses is the lack of awareness about the new technology. Also, expertise and professional knowledge have not been transferred to the tactical level. Specifically, respondents that represented three target populations such as boat owners, boat captains and boat crew still depend on the icing method assuming that it is the best or cheapest or only method available. More importantly, the study found that post-harvest losses of MDFB are considerably high, and it is superseding the available information. Also, the study has found that the continuation of post-harvest losses affects national security of the country in terms of food security, economic security, health security and community security. In addition, financial losses may lead fishermen to engage in illegal activities to income generate while it is making huge impacts on national security. Finally, as an Island nation, it is very much required for Sri Lanka to enhance improved marine fishing post-harvest management.

Keywords: *post-harvest management, RSW or CSW System, icing, multiday fishing boats, post-harvest losses, awareness, fish preservation, national security*

Strengthening the geopolitical aspects of Sri Lanka by joining the Regional Comprehensive Economic Partnership (RCEP)

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This research paper focuses on Sri Lanka, an island nation geopolitically significant in the Indian Ocean and Asia-Pacific region. It evaluates the geopolitical aspect benefits versus the challenges of integrating Sri Lanka within the world's most significant free trade agreement (RCEP). Although the economic aspects of Sri Lanka joining the RCEP are analysed, the geopolitical implications and aspects are yet to be uncovered. Therefore, this study investigated the geopolitical implications of Sri Lanka joining the RCEP analysing the impact that it may bring to the relations with member states, especially after India had opted out of participating in the RCEP partnership. The study analysed the possible benefits and challenges that may strengthen Sri Lanka's geopolitical aspect by joining a trade bloc in terms of building relationships with Asia-Pacific, the concept of geopolitical factors, and the geopolitical significance of the RCEP. In this qualitative research, data collection was conducted among experts in relevant fields sampled as representatives of government and non-government institutions. The themes were explored in depth using secondary data. Interview-based qualitative data were analysed and presented through thematic analysis, followed by themes that illustrate the aspects of geopolitics. The findings of this research will contribute to the understanding of how small nations such as Sri Lanka can use regional economic partnerships to enhance their geopolitical aspects and navigate complex international relations in an increasingly interconnected world.

Keywords: *Sri Lanka, RCEP, geopolitics, Asia-Pacific*

Mitigating ISIS Radicalization in Sri Lanka: Strategies and Challenges

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Sri Lanka experienced a period of relative peace and harmony after a 30-year protracted civil war. However, a new threat emerged with the radicalization ideas of ISIS, creating an unseen enemy. The devastating Easter Sunday attack on April 19, 2019, causing 269 deaths of innocent people and injuring over 500, marked a significant moment in Sri Lanka's history. These attacks serve as a lesson to society about the inability of mitigating radicalization without addressing its root causes producing temporary solutions. Radicalization is one of the main issues in the modern scenario. Controlling factors in radicalization, such as online radicalization, political and social grievances, and local extremist networks, may minimize the overall threat. With the emergence of AI, the threat can be elevated or countered, if necessary preventative measures are taken. This paper explores the origins of ISIS radicalization in Sri Lanka, the socio-political context that fosters such extremism, and outlines a comprehensive mitigation plan to prevent future radicalization. The findings will impact civil authorities' ability to handle such conflict situations before they escalate. The paper discusses qualitative recommendations to control and eliminate existing threats. This research takes the form of a qualitative study, utilizing both primary sources, such as statements, and secondary sources, including websites, books, government records, journals, and articles.

Keywords: *radicalization, extremism, mitigation*

AI-Driven Wars: Ethical Impact of the War on Gaza

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The Hamas attack on October 7, 2023 resulting in another Israel-Palestine war has escalated geographically, politically, and technologically. There have been many official and backchannel reports of the use of automated weapons by the IDF (Israel Defence Force) in their attacks on civilian populated areas. This paper focuses on the use of Artificial Intelligence in the War on Gaza. AI-enabled targeting algorithms like ‘Lavender’ and ‘Gospel’ have reiterated the way surveillance and precision attacks are conducted amidst conflict. This technology inducing mass casualties raises ethical questions about the rules of war. The use of technology to conduct deep surveillance in civilian populated areas and the reduction of human supervision in the decision-making process evidently has intensified the civilian casualties. This autonomous warfare raises a serious question on the protection of the basic human rights of civilians in Palestine. This paper study analysed the various reports and news coverage of the war on Gaza since October 7th to show the use of AI in this war. Since this is the first time the world has witnessed such an atrocity of this magnitude and nature, there are barely any strong studies on the matter. Therefore, the data collection was limited to on-ground mass media/ social media coverage of the events. Wars are inevitable, however, in the 21st century, the weaponization of AI technology has turned warfighting into an inhumanely brutal affair. By drawing examples of the attacks on Gaza by the Israeli Forces and analysing their nature, the paper brings out the ethical dilemma of the new age of warfare.

Keywords: *artificial intelligence, Gaza, AI weapons, automated warfare*

The Evolving Landscape of Military Manpower: Evaluating the Rise of AI in Possible Futures

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Despite widespread predictions about Artificial Intelligence (AI) related military applications, a few studies have explored the underlying reasons. This study investigated the potential correlation between demographic trends and the increasing reliance on AI in military manpower. The research question that this study attempted to answer is, “Why will the military manpower of future armies shift from humans to robots?” The methodology adopted in this study was the future studies research methodology of the Six Pillars approach and the research tool of back-casting. Further, case studies of the three largest militaries, China, India, and the United States (US) were considered in data collection. Demographic trends including population growth rate, population median age, total fertility rate as well as birth rate, and their impact on military recruitment and force composition was evaluated as research variables. This paper aims to highlight the paradigm shift in military manpower from the traditional recruitment of humans towards the integration of robot soldiers in the Possible Futures with a special focus on analysing the potentiality of AI to address recruitment challenges arising from demographic shifts. The paper concludes that while AI offers potential benefits, a balanced approach that considers technological and non-technological solutions is essential for future military manpower strategies.

Keywords: *possible futures, military manpower, AI, robot soldiers, China, India, United States, demography*

Artificial Intelligence and Deterrence: An Analysis of Practical Implications

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Artificial intelligence (AI) has emerged as a cutting-edge, transformative technology in the current world impacting the roots of the socio-economic structure. This has determined its significant role in the realm of deterrence as a rapidly growing technology and of its influence on decision-making and national security. In today's complex geopolitical landscape, the effectiveness of traditional methods of deterrence is increasingly questioned, particularly as state and non-state actors leverage advanced technologies. This research examines the current trends of deterrence and the processes that AI could use to enhance the effectiveness of deterrence strategies. This study used a qualitative approach to identify the current trends of deterrence and the potential practical applications of it in the age of AI. With the rapid development of AI, capabilities in data processing, management, predictive modelling, and information gathering have advanced significantly. These advancements present opportunities to make informed decisions that can improve the effectiveness of deterrence methods. As much as it is important to understand the advantages AI brings, it is more crucial to understand the threats and detriment it can impose on a state's national security.

Keywords: *artificial intelligence, deterrence, practical implications*

Money Laundering in Sri Lanka: Examining Socio-Economic Consequences, Social Conflicts, and Regulatory Challenges

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Money Laundering (ML) is a transnational offence involving multiple participants. As much as the crime in nature is perplexing, the investigatory process is complex as well. ML can happen in many ways including arms smuggling, human trafficking, illegal currency exchange, and pyramid schemes. Due to its abhorrent nature, ML has disastrous consequences on the economy and society. In economics, it causes tax evasion, distorts markets, and erodes financial institutions. Socially it increases crime rates and causes inequality and corruption. Sri Lanka due to its strategic geographic position faces ML threats. In light of that, the paper examines the socio-economic consequences of ML in Sri Lanka, with a specific focus on its impact on social conflicts, which served as the research problem. The objectives derived are to understand how ML implies social and economic settings, to identify how it contributes to social conflicts, to explore the current legal and regulatory challenges and weaknesses that persist, and to identify the potential measures to mitigate the socio-economic impact of ML in Sri Lanka. The researchers have utilized a qualitative methodology and both primary and secondary data have been utilized to analyse the setting and arrive at conclusions. Primary data was collected by conducting structured semi-structured interviews with Anti Money Laundering specialists in banking and non-banking financial institutions. Whereas secondary data was collected by perusing scholarly articles. In the end, researchers have showcased that despite numerous initiatives by the Financial Investigation Unit (FIU) of the Central Bank of Sri Lanka (CBSL) and other investigatory units, lapses in the legal frameworks hinder the judicial process causing social disruption as well as economic divisions.

Keywords: *money laundering, social conflicts, socio-economic consequences, economic instability*

Diplomacy in the Age of Information Warfare; Strategies and Challenges in South Asia

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Since the South Asian region is characterized by territorial disputes, potential nuclear threats and internal political instability, this research seeks to assess the correlation between information warfare and diplomacy. The general objective of this research is to provide insight into how cyber threats, the spreading of misinformation and propaganda interfere with diplomacy and regional security. Using a systematic literature review (SLR) methodology, this study synthesizes secondary qualitative data analysing peer reviewed articles, books, policy papers and reports while examining how state and non-state actors employ information warfare. The study shows that techniques like digital monitoring and social media deception significantly influence diplomacy therefore new strategies in cyber diplomacy are deemed necessary. It is crucial for South Asian nations to adopt better cybersecurity policies and measures for effective use of digital diplomacy to address these threats. The findings emphasize the transformative impact of information warfare on diplomatic strategies, the need of developing integrated regional approaches and multifaceted cybersecurity measures. The conclusion also highlights the importance of progress in digital diplomacy and ethical standards to maintain stability and build trust among South Asian nations. The study offers potential guidelines for policymakers and stakeholders aiming at mitigating the adverse effects of collateral consequences related to information warfare while fostering regional development.

Keywords: *information warfare, cyber diplomacy, South Asia, cybersecurity, regional cooperation*

Impacts of Artificial Intelligence for the Logistic and Economic Intelligence in Administrative Planning of Military Operations

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Logistic intelligence deals with the military assessment of the effects of terrain and climate conditions on military operations. Economic intelligence analyses country's financial strengths and weaknesses, including its ability to support and sustain military operations. According to the present Sri Lankan context, military logistic intelligence is concerned with geography, climate, entry points, transportation, static defence sites, POL, Water resources, electrical power, medical facilities, military production, towns, and manpower resources. The administrative plans are prepared according to the tactical plans to sustain the particular operation without coming to a halt. However, due to the influence of artificial intelligence in the 5th Generation of Warfare, the present-day logistic and economic intelligence may not support the administrative plans in such warfare. Therefore, it is necessary to study the impact and threats of the involvement of artificial intelligence and areas to ponder for administrative planning in such military interventions. This study analysed the logistic and economic intelligence factors influenced by Artificial Intelligence discusses the necessity of it for the future warfare concerns.

Keywords: *artificial intelligence, logistic and economic intelligence, administrative planning*

History of Chemical Attacks in Sri Lanka: A Special Reference to East Kiran Attack

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A chemical attack can be described as an attack executed by individuals or groups — terrorists, terrorist affiliates, or state-sponsored, and/or organized crime — through the deliberate release of a toxic substance, such as a gas, liquid, or solid, in an attempt to cause, injury, public harm or loss of life. Only a limited number of chemical attacks has been reported in Sri Lanka, the East Kiran attack that took place in 1990 can be considered as the major chemical attack in the Sri Lankan history. The Liberation Tigers of Tamil Eelam (LTTE or Tamil Tigers) carried out a crude chemical assault on a Sri Lankan Armed Forces (SLAF) encampment in East Kiran, in the Batticaloa district of Sri Lanka in 1990. This paper provides a brief introduction to chemical attacks and examines the incident considering the potential use of unconventional weapons such as chemical warfare agents. , It also discusses health effects endured by soldiers after the attack. It also examines the possible reasons for not preventing this attack by the Government of Sri Lanka and the precautions that can be taken by the Sri Lankan authorities to avoid any future chemical attacks in Sri Lanka. Data was gathered for this study through books, newspaper articles and interviews with participants who have hands-on experience of the incident in order to gain a deeper understanding of the incident. The main purpose of this study was to understand the historical context of the use of chemical weapons in Sri Lanka and discover the possible precautions that can be taken to avoid such attacks in the future.

Keywords: *chemical attacks, Sri Lanka, East Kiran, terrorists, chemical warfare*

The Impact of Artificial Intelligence on Military Defence and Security: A Case Study on Sri Lanka Navy's Red Sea Deployment

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This study examined the critical impact of artificial intelligence (AI) on military defence and security with a special focus on the Sri Lanka Navy's deployment in the Red Sea. In February 2024, the Sri Lanka Navy joined the Combined Maritimes Force in the "Operation Prosperity Guardian" to increase patrols in the Red Sea to protect the free flow of economic activities from Houthi terrorists and to ensure the safety of navigation. Houthis had been using sophisticated AI technologies such as drone warfare, unmanned surface vehicles, and cyber operations which posed a significant challenge for the friendly forces in the Red Sea. However, the Sri Lanka Navy could complete the operation despite its current lack of AI integration and limited capability to counter AI-enabled attacks. Until today, the Sri Lanka Navy is not equipped with the necessary weapons or systems to effectively combat these advanced threats. This study highlights the disparity between the technological capabilities of the Sri Lanka Navy and the AI-enabled adversaries by emphasizing the urgent need to enhance its technological infrastructure and adopt AI-driven defence mechanisms. The study used a descriptive case study method with a subjectivist inductive approach to underscore the importance of AI in modern military strategy and the potential risks of remaining technologically underprepared by analysing the operational difficulties and strategic vulnerabilities experienced during the deployment. The findings advocate for a strategic overhaul to incorporate AI technologies, which would improve the Sri Lanka Navy's resilience and effectiveness in countering AI-based threats. This case study provides insights into the current state of military defence capabilities in the face of rapidly evolving AI threats and the necessity for modernization and adaptation within the Sri Lanka Navy to maintain regional security and operational integrity.

Keywords: *Sri Lanka Navy, Red Sea, Combined Maritime Force*

AI-Powered Drone Warfare: A Case Study on Russia-Ukraine War

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The current Russia-Ukraine War has led to the development of new strategies and technologies such as the militarization of Artificial Intelligence (AI). Russia is alleged to have assisted in the deployment of drones, interfered with communications, and carried out cyberattacks using AI-powered systems. Concurrently, Ukraine has also seen an unparalleled level of drone deployment, with thousands of unmanned aerial vehicles (UAVs) being employed that utilize AI to bomb targets, guide artillery, and observe enemy formations. These AI-enabled tactics have allowed both countries to carry out complex and coordinated attacks with precision. This study delves into how AI-powered drone warfare has been utilised in the modern context by using Russia-Ukraine war as a case study. The research aims to analyse the revolution of AI in the context of warfare. Key aspects covered include the strategic influence of AI-powered drones on conventional combat paradigms and the operational efficiency. It also discusses the ethical considerations and future implications while highlighting the usage of AI-powered drones. The research methodology employed is a mixed-method approach, incorporating both primary data which includes government-released data and drone footages as well as secondary data from literature and doctrines. The conceptual framework is based on the review of theoretical studies. The Russia-Ukraine War provides a current example of the significant influence of AI, and this paper lays the groundwork for a thorough investigation of its revolutionary significance in contemporary warfare specialising in drones.

Keywords: *Russia-Ukraine war, artificial intelligence, drone warfare*

Warfare in the Age of Artificial Intelligence: Changing Dynamics

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Warfare in the middle of the 20th century took a different course of action with the invention of the first nuclear bomb in 1942, which changed the international political landscape for the rest of the century. It also induced changes in the way wars are fought, deterred, and resolved. In recent history, there were at least 10 military revolutions and the party who was able to exploit the most out of each revolution had a leading edge in conquering the other. This study conducted a comparative analysis of warfare in the 21st century and its changing dynamics with the advent of artificial intelligence (AI), demarking paradigm shifts in the age of modern technology. This paper assists in understanding the use AI in military systems and military organizations collectively determining the outcome of future warfare. The study utilized a qualitative approach to identify shifts in the above dynamics and analyse their future implications. Following the end of World War I, the rapid improvements and innovations paved the way for new concepts like blitzkrieg. This study conceptualized the advancement of technology, and its threatening implications. They were analysed through a multi-dimensional approach and the existence of battlefronts in modern warfare. Drone technology and integration of AI seems to be more precise and highly effective than other technologies which further solidify the eminent changing dynamics.

Keywords: *warfare, artificial intelligence, military revolution*

A Strategic Approach to Enhancing National Security in Sri Lanka by Decentralizing Energy Production Through Domestic Solar Systems

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Energy security can be defined as the capability to consistently power a society at an affordable cost without the risk of a sudden power loss. Energy security becomes vital for political stability, social stability, economic performance, and national security. As of August 2023, in Sri Lanka, electricity capacity stood at 61% from thermal power and 22% from hydropower, with the remainder from other renewable sources, all energy products based on a limited number of centralized power plants. The dependence on fossil fuels, which is rain-fed, has become unbearable today because of the ever-increasing fuel prices. Further, regional conflicts, climatic changes, economic sanctions, or tensions involving the suppliers interrupt imports and turn Sri Lanka into more expensive options, giving rise to a dangerous national security risk. Sri Lanka's centralized energy infrastructure, including its major power plants, oil pipelines, storage facilities, and electrical grids, is crucial for energy supply. Damage to facilities like the Norochcholai Coal Power Plant, especially during the dry season from natural disasters, operation failures, or security threats, can lead to widespread power outages, disrupting daily life and economic activities. Having the advantage of geographical positioning for solar energy, domestic solar systems would make Sri Lanka more secure nationally by decentralizing energy production. It reduces security vulnerability associated with centralized power plants and grid infrastructure by providing more resilient and reliable access to energy. Decentralized domestic solar systems reduce geopolitical tensions, global supply disruptions, vulnerability of military targets, and rapid recovery from natural disasters or sabotage. The methodology used for the study to analyse the impact of decentralized energy production in Sri Lanka using domestic solar systems included surveys, analysis of historical data, and technical and economic feasibility data collection. The outcomes are the recommendations for reduction of dependence on centralized power plants, increased energy independence, and evidence-based recommendations for improving national security.

Keywords: *national security, energy security, solar power, decentralized*

Diaspora Diplomacy: A Case Study of Indian Diaspora's Geopolitical Impact

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The geopolitical influence of diaspora communities is increasingly reshaping global politics, with India's diaspora emerging as a key player. This study critically examines the role of the Indian diaspora, particularly under the leadership of Prime Minister Narendra Modi, in enhancing India's geopolitical, economic, and cultural stature. It focuses on India's strategic engagement with its diaspora to achieve broader economic and political objectives, positioning the diaspora as an essential tool of statecraft. Through qualitative analysis of political events, economic data, and cultural trends, this research aims to provide a nuanced understanding of the Indian diaspora's role in global affairs. Key findings reveal the Indian diaspora's political activism particularly in Canada and the UK, through movements like Operation Blue Star and the Khalistan Movement. Economically, remittances and investments from the diaspora have contributed significantly to India's development, though further research is needed to fully understand how these financial flows translate into broader economic growth. On a cultural level, Bollywood continues to be a powerful force, fostering a sense of identity among Non-Resident Indians (NRIs) and maintaining strong ties with the homeland. This study highlights the multifaceted nature of the Indian diaspora's influence, framing it as a crucial soft power instrument for India. Beyond financial remittances, the diaspora contributes to the global dissemination of ideas, values, and practices, reinforcing India's international presence. The findings call for a deeper examination of the Indian government's evolving strategies to harness these contributions more effectively.

Keywords: *Indian Diaspora, Geopolitics, Political Movements, Remittances, Soft Power, Modi Administration*

13th Amendment to the Constitution of Sri Lanka: Impacts and Challenges

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The 13th Amendment (13A) to the Constitution of Sri Lanka, certified on November 14, 1987, has become controversial for many reasons, including the influence of India. 13A is a topic that surfaces from time to time until a sustainable solution is implemented for the issues arising from the amendment. The objective of this study was to critically analyse the impacts and the future challenges of the amendment. In this study, data was mainly collected through qualitative approaches such as interviews, case studies, and literature reviews. The amendment has not been fully implemented to date and there have been many arguments and criticisms; especially concerning the devolution of 'Police' and 'Land' powers to the Provincial Councils (PCs). The collected data on diverse views on the amendment and its proposed devolution of powers will be discussed in this paper. The observed negative and positive feedback on the opinions such as "13A", "13-plus," or "13-minus" will also be discussed. The main findings of the study includes the lack of financial autonomy given to the Provincial Councils and the overriding powers granted to the central government concerning the devolved legislative and executive powers. This study tried to analyse the existing issues with the 13th amendment to the constitution and to identify viable solutions to be agreed upon by all.

Keywords: *thirteenth amendment, devolution, power, constitution, provincial councils*

Potential of Artificial Intelligence as a Remedy for the Challenges Faced by the Sri Lanka's Armed Forces in United Nations' Peace Keeping Operations

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The United Nations (UN) charters like Chapter 6 and Chapter 7 have played a huge role in the ongoing peacekeeping programmes around the world. As there is a huge paradigm shift alongside the use of Artificial Intelligence (AI), the body of the UN Peacekeeping Operations (UNPKOs) has also taken a seismic shift from what it was before. Gaining recognition and appreciation for their contributions while also averting potential criticism are the goals of enhancing the standing of the Sri Lankan armed forces in the international community. This study aimed to shed light on how AI can play a significant role in assisting UN Peacekeepers beyond their traditional staff duties, enhancing their capabilities and effectiveness in various areas in UN Peacekeeping roles beyond their assigned duties of the respective missions. The goal was to demonstrate the Sri Lankan armed forces' dedication to upholding humanitarian principles and how integrating AI into their operations might foster stability in areas affected by drawing attention to their humanitarian role in UNPKOs. For the qualitative study, four local military expert veterans were chosen. Focus groups and interviews were used to gather data. By integrating AI into their operations, the Sri Lankan armed forces can enhance their humanitarian contributions, strengthen civil-military cooperation, minimize criticism, and gain recognition as important participants in global peace and security efforts. This will help establish a positive reputation and highlight their commitment to peacekeeping and humanitarian assistance.

Keywords: *UNPKOs, Sri Lankan armed force, artificial intelligence*

Potential of Artificial Intelligence as a Remedy for the Challenges Faced by the Sri Lanka's Armed Forces in United Nations' Peace Keeping Operations

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Sri Lanka has much to offer in the realm of cultural diplomacy as its culture is enriched with various aspects such as arts, dancing, gastronomy, and textiles. The prowess of the island nation in terms of culture is unfathomable because of unidentified areas of its uniqueness and the scientific nature of the material arts. The country has a long illustrious history renowned worldwide. Although the country's well-structured cultural diplomacy aids in popularising its unique identity internationally, there are numerous factors that obstruct the process of taking the Sri Lankan culture into the world. One such recent development is the global domination of Artificial Intelligence (AI). The development of technology has now reached new heights with the rapid surge in utilizing AI for many purposes by the countries. Therefore, creating a nexus between the Sri Lankan culture and AI will assist in reshaping the means of modern cultural diplomacy and thereby increase the maximum benefits achieved by the nation. However, as that process is complex and will be hindered by multiple challenges, this study aimed to identify those challenges. The study also focused on analysing to what extent AI as a strategic tool can be strengthened in building cultural ties. The study used a qualitative method based on numerous primary and secondary sources.

Keywords: *cultural diplomacy, artificial intelligence, forging relations*

The Galactic Chessboard: A Comparative Analysis of Space Warfare Strategies Employed by the US, Russia, and China

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It is becoming increasingly important to understand the implications of military strategies moving beyond our planet and their impact on our security. This study conducted a comparative analysis of space warfare strategies and policies employed by the United States, Russia, and China. It used a qualitative methodology, specifically employing a comparative analysis method to examine and interpret the data. It explored historical contexts, strategic objectives, technological advancements, and the geopolitical implications of each nation's approach and the differing approaches of American, Chinese, and Russian space policies and military doctrines toward space militarization. The Chinese government uses its military strategy to integrate space capabilities and designs anti-satellite (ASAT) weapons to be used against American supremacy. Meanwhile, Russia is improving its ASAT technology to catch up with both China and the US. This study further analysed the patterns of ASAT testing, the ASAT test ban treaty, and the risk posed by Chinese and Russian ASAT weapons to US space assets. Although the US has the largest budget and can act swiftly than any other country, there is a significant growth in counter-space technologies from China and Russia. China and Russia did not sign the ASAT test ban treaty because they want to maintain strategic balance and are skeptical of US intentions. In conclusion, these space strategies influence global security and to deal with the hazards of the militarization of space it is required to continue investing in space security. Thus, restrictions on arms need to be carried out while cooperating internationally

Keywords: *space warfare strategies, space weapons, space militarization, anti-satellite weapons*

POSTER PRESENTATIONS

Artificial Intelligence in Maritime Security: Enhancing Future Strategic Stability in the Indian Ocean Region

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The Indian Ocean Region (IOR) is significantly important, and it plays a pivotal role in the global maritime trade networks and energy corridor; therefore, its security is paramount. Now it is facing the latest challenges and requires new strategies for its sustenance. This paper aims to examine the evolution of artificial intelligence (AI) and its application to enhance regional maritime security in the IOR, with an understanding of how AI could contribute to the improvement of maritime security to guarantee future strategic stability within the IOR. This study defines significant domains that are encouraging for the application of AI and incorporated in maritime operations surveillance, threat recognition, decision-making, and even the autonomy of systems. The paper is qualitative and provides a critical examination of the present context of the geopolitical and security risks of the seas. The study demonstrates how AI implementation impacts regional collaboration and the resolution of conflicts, with an emphasis on ethical issues and complying with international legal frameworks where necessary. Moreover, it responds to the threats and prospects of AI, technological firepower, and the rising challenges of capacity-making among the IOR states. The paper illustrates how the incorporation of AI is anticipated to change maritime security for the better and advance the stability of the Indian Ocean region through studying several academic publications and case studies. There is strong evidence that indicates the use of AI technologies requires strategic investment while multilateral cooperation is equally important in improving security for the IOR states.

Keywords: *artificial intelligence, maritime security, Indian Ocean, strategic stability*

Evolving Threats and Strategies in Modern Military Security: An Analysis of Global Approaches

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The traditional understanding of security often revolves around notions of power, sovereignty, and military strength. Global military security involves measures and strategies by countries to protect themselves against foreign threats, including military alliances, defence budgets, troop deployments, weaponry, and intelligence operations. Research on evolving threats and strategies in modern military security is crucial to address global security challenges. Traditional methods are insufficient due to technology advancements and non-state actors. Understanding global approaches helps coordinate efforts and combat threats beyond national borders. How can Artificial Intelligence (AI) effectively used to improve military security strategies in combating terrorism in the modern era, and how can AI technology be used to develop military cyber security and safeguard military infrastructure from cyber threats today are the major problems that arise by studying about the threats and strategies in modern military security. This study aimed to analyse the evolving threats and understand strategies in modern military security. To study this phenomenon, primary and secondary resources such as the opinions of experts and existing literature were used. The present study illustrates that the security of a country depends on the country's military and the use of technology in the modern military.

Keywords: *global security challengers, artificial intelligence, non-state actors*

Leveraging Sri Lanka's National Intelligence: Prospects from Anti-Money Laundering and Counter-Terrorist Financing

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The integration of enhanced financial intelligence for the military and national intelligence is crucial to strengthening the national security framework of Sri Lanka. Financial intelligence provides specific behaviours, patterns, and connections of individuals or groups which are vital pieces of evidence in making predictions in the intelligence process. This paper delves into the feasibility of getting additional advantages by incorporating Anti-Money Laundering (AML) and Counter-Terrorist Financing (CTF) measures into both national and international efforts to enhance the existing intelligence mechanism of Sri Lanka. Accordingly, the emphasis is placed on demonstrating how financial intelligence would efficiently identify, track, and recognise behaviours of criminals including terrorists. Hence, financial transaction details are considered accurate, and timely information which are categorized as premier information that is easily transformed to intelligence through analysis, synthesis, and interpretation. Most importantly, financial information is currently in digital formats, thereby dissemination of information amongst stakeholders is comparatively easier, but non-availability of a mechanism to swiftly transfer financial information makes the vital intelligence obsolete. The study used a multi-method qualitative methodology, where data were gathered through interviews and primary and secondary data published by local and international agencies. The study underscores the existing AML and CTF practices, strengths, and weaknesses, and suggests improvements to be made to achieve the intended objective of acquiring financial intelligence and a profound intelligence network.

Keywords: *anti-money laundering, counter-terrorist financing, financial intelligence, national intelligence, Sri Lanka*

Identifying Challenges in Integrating AI Technology for Intelligence Gathering in the Sri Lankan Army

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Incorporating artificial intelligence (AI) technology into intelligence-gathering systems illustrates a remarkable advantage for uplifting the operational necessity of armed forces. This study aimed to identify the challenges encountered by the Sri Lankan Army in acquiring AI technology for intelligence-gathering purposes. The implementation of intelligence is a barrier despite the potential benefits. The variables identified were scarcity of technological infrastructure, training and expertise gaps, resource constraints, and legislation provisions. The sample included 300 military intelligence personnel presently serving. The pilot questionnaire was restricted to 25 of them. SPSS was used as an analytical tool. A reliability test was carried out for each variable and received an acceptance level. Cronbach's Alpha was .825. A bivariate analysis was carried out to identify the Spearman Correlation. The positive association between the acceptances of all alternative hypotheses was accepted, and the null hypothesis was rejected. The Chi-Square testing summary further illustrates the rejection of the study's null hypothesis. Findings of the study were generated through the survey data, and recommendations were suggested accordingly. The study identified that AI platforms can be used to process heavy volumes of data such as imagery and social media data and drones and other automated tools can be used to monitor large areas constantly, Utilising AI to face cyber threats, analyse anomaly detections in the cyber domain, and the interaction of human-AI collaboration is significant.

Keywords: *SL Army, military intelligence, AI*

Leveraging Artificial Intelligence to Counter Violent Extremism and Hate Speech Online: A Case Study of Sri Lanka's National Security Measures

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The spread of violent extremist ideas through online platforms poses a significant threat to Sri Lanka's national security and global security. This study examines the existing legal framework in Sri Lanka concerning hate speech and violent extremism and highlights the importance of using Artificial Intelligence (AI) to counter the spread of extremist rhetoric online. The primary research question addressed how AI can be utilized to effectively monitor, identify, and counter violent extremist ideas and hate speech on online platforms in Sri Lanka. The study's objectives included evaluating the current legal framework, assessing AI's potential in combating extremist content, understanding the ethical implications of AI use, and proposing a balanced approach to safeguard national security and citizens' privacy. By a comprehensive literature review and case study on the Easter Sunday attacks in 2019, the study showed that despite international commitments to curb hate speech and violent extremism, Sri Lanka has limited strategies. AI can be used to identify, analyse and block hate speech and violent extremist narratives which help national stability. However, the implementation of AI may impact the privacy of the citizen and potentially lead to social unrest. Therefore, a balanced and ethical approach is needed. The study concludes that by combining coordinated government initiatives and collaborations with non-governmental organizations, AI, can transform conflict management. Further, cooperation between governments, technical companies and international organizations would create a safer world

Keywords: *violent extremism, hate speech, artificial intelligence (AI), online*

The Role of Information Warfare in Exacerbating Ethnic Tensions: A Case Study of Sinhala-Muslim Dynamics in Sri Lanka

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The world is currently witnessing an Information war (IW) that extends beyond traditional military conflicts. Vital information has the power to forge international alliances or breach harmony. IW manifests through disinformation, misinformation, false information, propaganda, hate speech, cyber hacking, and election meddling, resulting in chaos, polarization, division, and misrepresentation. This non-kinetic competition poses a significant and disruptive threat globally. In the context of Sri Lanka, IW poses a critical national security challenge by breaching peace and harmony. The study attempted to identify how IW in Sri Lanka often exploits historical grievances, religious differences, and ethnic tensions to fuel conflict. This manipulation of information exacerbates existing divisions and threatens social cohesion. This study aimed to identify IW as an emerging threat and assess its impact on Sri Lanka's security landscape in light of ethnic tensions. A qualitative methodology and secondary data were utilized to conduct a social media analysis. to uncover how IW operates in Sri Lanka. The study addressed key questions: How does IW manifest in Sri Lanka? What are the specific impacts of IW on national security and societal harmony? What proactive and preventive measures can Sri Lanka implement to counter IW effectively? to the study showcases that a multifaceted approach that combines regulatory measures, educational initiatives, and community engagement is needed to handle IW.

Keywords: *information war, national security, social media*

The Geopolitics of Artificial Intelligence: Power shifts in the 21st Century

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The paper deals with the strategic role Artificial Intelligence (AI) is likely to play in determining the power play between the United States, China, and the European Union. AI has turned, throughout the 21st century, into a very important tool for those nations trying to seek supremacy in military, economic, and technological fields. The United States is trying to retain its technological edge with huge capital investments in AI, and the country is pioneering in innovation and defence technologies across the world. China desires to become an international leader in the use of technology; it is implementing AI in its surveillance systems, economic undertakings, and in the expansive Belt and Road project conceived to further its influence and extend its reach to multiple regions across the globe. Contrarily, the European Union has taken a different course: it has been stressing ethics in AI use and creating global governance on AI, thereby positioning the EU as one of the leading actors in setting international regulations on AI. It is these different paths which are giving rise to new global alignments, rearranging power structures, and giving rise to new patterns of cooperation and competition among these big actors. The results of this paper shed light on the central role played by AI in international relations in modern times, far from being a simple accessory; it is going to be a key determinant for global security and power shifts. From the point of view of these emerging dynamics, this paper gives the medium-term view of how, with AI, international relations will shape up, what kind of new developments would come into view, and problems that will crop up.

Keywords: *AI, geopolitics, global power dynamics*

Utilizing Artificial Intelligence for Detection, Delay and Response of Chemical, Biological, Radiographical and Nuclear Threats

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According to United Nations Resolution 1540 (2004), the proliferation of nuclear, chemical, and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security. Maintenance of appropriate and effective border controls and law enforcement efforts are essential to detect, deter, prevent, and combat this threat. Cooperation between the state and domestic authorities is seen as a necessity in addressing this problem. In the modern world, this functionality involves the significant involvement of modern technology. Although the full potential of AI is yet to be realized, the utilization of AI for the benefit of these processes cannot be underestimated. Specifically, AI can be employed to enhance the detection, delay, and response (DDR) to CBRN threats that may be exchanged across Sri Lanka's borders. The implementation of AI-driven solutions necessitates updates to existing policies, particularly concerning the integration of AI with traditional security measures and the protection of sensitive data. This study investigated the necessity created among CBRN proliferation, AI, and border security. The methodology used was qualitative. The data was collected from experts in the field. Findings, including the handling of dual-use goods and suggestions for detection, delay, and response (DDR), will be discussed as policy recommendations for state authorities to use in security policymaking.

Keywords: *CBRN threats, DDR, AI, boarder security, security policymaking*

Redefining Global Security in the Digital Age: Nuclear Proliferation

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Artificial intelligence (AI) and machine learning have become significant in many fields. The development of highly accurate models has a critical influence on international politics, especially in light of nuclear weapons. The role of nuclear weapons is to deter threats because nuclear wars would create destruction and security concerns. The militaries across the world believe that AI applications can determine the future of warfare by increasing the use of AI through surveillance, early warning capabilities, and command and control systems while threats such as economic costs and humanitarian consequences are visible. This creates both negative and positive results. Through the integration of AI in military systems, certain countries focus on improving military capabilities and ensuring strategic stability. While Russia sees AI as a necessity in nuclear warfare, the USA sees it as an important component in maintaining military superiority over its adversaries. Even with different purposes of AI in nuclear warfare, all states come to a general agreement that humans should always play the central role in decisions on nuclear weapons. Further AI has significant implications for nuclear proliferation in numerous regions. This study focused on the present-day context of nuclear proliferation considering it as one of the biggest threats to mankind and AI can take them to uncontrollable levels. This study examined the theories and concepts such as security dilemma and deterrence through existing literature.

Keywords: *artificial intelligence, nuclear proliferation, nuclear weapons, nuclear warfare, deterrence, security dilemma*

Artificial Intelligence and Human Inputs in Warfare Systems: A Comparative Analysis on Challenges and Opportunities

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The warfare systems, which were fundamentally dominated by human intervention in the early years, have evolved in the modern context with the advent of emerging technologies such as non-human intelligence. In that case, modern warfare systems, enhanced by the integration of Artificial Intelligence (AI) have been able to achieve efficiency, maintenance capacity, risk management, cost reduction, and surveillance. However, while AI contributes to increasing the overall performance on the battlefield, it also presents challenges in areas such as adaptability, complexity, and ethical concerns. Although the deployment of AI in warfare reduces the need for human involvement, it is crucial to be concerned about the diminishing role of human skills and capabilities on the battlefield. This influences to understand the comparative dynamics between AI and human inputs in warfare systems. This study explored the challenges and opportunities of both AI and human inputs in warfare, along with a comparison of both, focussing on aspects such as efficiency, maintenance capacity, decision-making, surveillance, risk management, adaptability, and strategic implications in warfare systems. The study, which was mainly conducted through qualitative methods by looking into case studies and existing literature, found that AI can enhance capacity, reduce human error, and save human capacity for other essential tasks in warfare systems. In contrast, it introduces uncertainties that are less prevalent with human inputs. Furthermore, the study emphasised that both AI warfare systems and conventional warfare systems can have challenges and opportunities that require an integration of both AI and human inputs in warfare. The findings also illustrated that, a good collaboration between these two can be influential in the battlefield, ensuring adaptability for evolving trends through effective warfare strategies.

Keywords: *artificial intelligence, human inputs, warfare systems, challenges, opportunities, comparison*

Artificial Intelligence in Counter Insurgency Operations: Enhancing Combat Efficiency and Combat Effectiveness in Sri Lanka

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Sri Lanka, situated strategically in the Indian Ocean, faces insurgency challenges due to her complex socio-political dynamics. This paper investigates how artificial intelligence (AI) can enhance counterinsurgency (COIN) operations to improve combat efficiency and effectiveness. Historically insurgencies that took place in Sri Lanka, including those by the LTTE, JVP, and ISIS affiliates, have exposed significant operational weaknesses of the state in responding such as slow intelligence processing, inadequate threat detection, and challenges in managing complex terrains and cyber threats. AI presents a transformative opportunity to address these issues. By applying AI, military operations can be benefitted from advanced data analytics that quickly processes vast amounts of information to extract actionable intelligence, thereby reducing the time required for decision-making. AI-powered surveillance systems and unmanned vehicles can enhance real-time monitoring and threat detection, offering early warnings and more precise responses. In addition, AI algorithms can improve target recognition and prediction of insurgent behaviour by integrating with Geographic Information Systems (GIS), which facilitate more accurate operational planning. AI-driven simulations and training programs can prepare troops for diverse and evolving scenarios, enhancing readiness and adaptability. Furthermore, AI can strengthen cyber security by identifying and neutralizing cyber threats and monitoring insurgent activities in digital spaces. This paper argues that the strategic integration of AI into COIN operations will significantly bolster Sri Lanka's ability to effectively counter insurgent threats, contributing to national stability and security.

Keywords: *artificial intelligence, counterinsurgency, Sri Lanka, Military Operations, National Security*

The Role of Artificial Intelligence in Diplomacy: Strengthening or Replacing Traditional Methods

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Diplomacy is fast becoming an area of great interest to Artificial Intelligence (AI). This paper examines the evolving role of AI in diplomacy, focusing on its potential to both enhance and challenge traditional diplomatic practices. As AI technologies advance, their significance in diplomatic functions becomes increasingly prominent. This study explores how AI can contribute to diplomacy through advanced data analysis, predictive modelling, and task automation, offering opportunities to streamline diplomatic operations, refine decision-making processes, and provide valuable insights into complex global issues. However, integrating AI into diplomatic frameworks presents notable challenges. The paper addresses key concerns such as the risk of AI-related bias, the necessity for transparency in algorithmic decision-making, and the imperative for accountability in AI-driven actions. These issues underscore the need for a strategic approach to the implementation of AI in diplomatic contexts. The study asserts that AI should be seen not as a replacement for traditional diplomatic methods but as a complementary tool. By combining AI capabilities with human expertise, a hybrid diplomatic model can be developed, leveraging the strengths of both AI and human judgment. This integrated approach aims to foster more effective and nuanced diplomatic engagements, enhancing the ability to collaboratively address and resolve intricate global challenges. The study advocates for this hybrid framework as a means to advance diplomatic practices in the AI era, ensuring that technology augments rather than replaces established processes.

Keywords: *Artificial Intelligence, Diplomacy, data analysis, Predictive Modeling, automation, ethical considerations*

The Chinese Belt and Road Initiative and Sri Lanka: Geopolitical Implications and Infrastructure Development

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China is considered an economic and military superpower in the world. Intending to improve its military potential further, it has launched the Belt and Road Initiative (BRI) project as a leading foreign policy strategy. It covers several geographical regions of the world and has greatly affected shaping the geopolitics of those regions. Sri Lanka as a country in the Indian Ocean region has also become a focal point of this project. As the country's infrastructure development is significantly shaped by China's current geopolitical ambitions, this increasing trend should be systematically studied with special references to BRI projects in Sri Lanka while exploring geopolitical ramifications embedded in those projects. While taking the assessment of the geopolitical implications of the BRI projects in Sri Lanka as the main aim of this study, two specific objectives were included: to examine the broader relationship between infrastructure diplomacy and geopolitics and to analyze the BRI projects as geopolitical tools to assess the regional politics during 2005 to 2019. This was a qualitative study and the data was collected through interviews. Descriptive analysis method was used in elaborating the results.

Keywords: *Belt and Road initiative, infrastructure development, geo-politics, infrastructure diplomacy*

Effects of Strategic Competition on Third Parties in the Indian Ocean and Their Implications to Small States: With Special Reference to a Case Study of Sri Lanka

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In the ancient past, the Indian Ocean was called the Eritrean Sea. The term Indian Ocean was used from sixteenth century onwards. Indian Ocean is inherited with the strategic competition of Indian Ocean states as well as extra-regional states. Sri Lanka has played a vital role in the Indian Ocean matters throughout the past and always has used her strategic importance and diplomatic strengths to achieve greater results. The focus of this research study is to identify the importance of the modern-day geopolitical position that Sri Lanka holds and the strategic consequences it faces due to the Indian Ocean strategic competition in the 21st century. The maritime boundary shared by India and Sri Lanka is one of the most vulnerable geographical areas that could influence the behaviour of the Indian Ocean. This paper will examine the dynamics of the third-party spillover effects of the strategic competition of the regional and extra-regional actors of the Indian Ocean. The methodology used is a qualitative one. Primary data and secondary data were collected and interpreted to analyse the spillover effects of the strategic competition in the Indian Ocean. The Author argues that due to the strategic competition, there are third-party security effects faced by small states like Sri Lanka, while aiding them to carry out optimistic international relations by utilizing the above strategic strengths.

Keywords: *strategic competition, Indian Ocean, Sri Lanka.*

AI in Defence Logistics: Optimizing Supply Chains and Resource Management

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Alongside the growing instability within Europe's security landscape, militaries begin to seek innovative ways to counter newly emerging threats. This study analysed how AI may enable military forces to develop, conduct, and grow their logistics capabilities in ways that help them achieve operational objectives. This study was based on a literature analysis, and focused on three relevant theories of growth explaining organizational expansion. The study analysed the relationships between logistics, AI, growth theories, and industry growth practices in supporting the military logistics growth development where support from both the established growth theories and the long-standing industrial practices are needed. The study positions AI as a crucial enhancer in developing an optimal strategic-fit growth concept. The study identified nine propositions that underscore the relationship between theoretical variables of growth enhanced by AI, providing a framework to guide future research on military logistics growth. A comprehensive literature review synthesizing existing theories of organizational growth with practical industrial practices and exploring their intersection with AI-enhanced logistics in military contexts was conducted. This findings propose AI-driven strategies for military leaders to enhance logistics growth, contributing to military innovation and expansion. It further bridges the gap in the literature on an area relatively unexplored in relation to AI-enabled logistic growth in the military. The results further provide a strategic pathway for innovation and expansion in military logistics.

Keywords: *AI, logistics, defence*

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