"Sustainable Competitive Advantage Through Innovative Research Ideologies"



WAYAMBA UNIVERSITY RESEARCH CONGRESS



PROGRAMME BOOK

WURC - 2021

Wayamba University of Sri Lanka Kuliyapitiya





PROGRAMME BOOK

6th Wayamba University Research Congress - 2021

WURC - 2021

"Sustainable Competitive Advantage through Innovative Research Ideologies"



03rd December 2021

Organized by

Senate Research and Higher Degrees Committee Wayamba University of Sri Lanka





Message from the Acting Vice-Chancellor of Wayamba University of Sri Lanka and Dean, Faculty of Medicine



Acting Vice-Chancellor
Dean - Faculty of Medicine
Wayamba University of Sri Lanka

I am pleased to write this message for the proceedings of the 6th Wayamba University Research Congress 2021 (WURC), on the theme, "Sustainable Competitive Advantage through Innovative Research Ideologies".

The Wayamba University of Sri Lanka is on the front lines in research and innovation with its staff gaining recognition nationally and globally. This annual event serves as a platform for not only senior researchers, but also for junior academics and postgraduate students to share their research findings, mostly funded by the Wayamba University of Sri Lanka.

The number of students pursuing postgraduate studies by research is increasing annually. Researchers of a high caliber are available to guide these students in their chosen fields. Those professional researchers as well as the postgraduate students will present their research at this forum, in parallel sessions in Agriculture, Applied Sciences, Management, Medicine, Technology and Livestock, Fisheries, and Nutrition. As

Dean of the Faculty of Medicine, I am proud to be a part of this great event.

I wish to commend all the researchers who continued with their work despite the limitations of the past two years. I would like to especially appreciate the Chairman and Members of the Senate Research & Higher Degrees Committee (SRHDC) and the Co-Chairs of WURC, for their untiring efforts to organize this event despite a variety of constraints experienced in the face of the Covid-19 pandemic.

I would also like to extend my appreciation to the public and private sector institutions which have partnered with the Wayamba University of Sri Lanka in the research programmes of the staff and students.

As the Acting Vice-Chancellor and the Dean of the Faculty of Medicine, I congratulate all those who are making presentations today and those who will be honoured at this gathering for their achievements in research and innovation.



Message from the Chairman of the Senate Research and **Higher Degrees Committee**



Dr. W. A. S. Wijesinghe Chairman Senate Research and Higher Degrees Committee Wayamba University of Sri Lanka

It is my great pleasure to welcome you the event. to the 6th Wayamba University Research Congress (WURC) as the Chairman The WURC - 2021 would not have been of the Senate Research and Higher possible without the enthusiasm and Degree Committee (SRHDC) of Wayamba hardworking of the Co-Chairs, Dr. Asanka University of Sri Lanka (WUSL).

WURC is a venue for Researchers and Secretariat, Mrs. D.M.K.G Niroshini and Postgraduate students of the WUSL to her staff for all the support given to make disseminate the finding of their research the event a success. WURC relies on the work. Adding colors to the event, we honor contributions of many volunteers, and I the contributions for research of our would like to acknowledge the effort of staff by awarding many awards including academics for their help in the review Wayamba University Research Awards, process and other volunteers who Awards for Publications in Indexed support in various ways for the WURC -Journals, and Faculty Research Awards.

On behalf of the SRHDC, I wish to congraduate all who are presenting their research findings and those who are qualified to be award winners today.

My special thanks to the Chief Guest, Dr. Sanjeewa Bowatte, Acting Vice Chancellor of the Wayamba University of Sri Lanka and the Keynote Speaker, Senior Prof. K.D

Gunawardana for their participation in

Dharmawansa and Dr. Kumara Uluwatte. Further, I extend my thanks to WURC 2021.



Message from the Dean Faculty of Agriculture and Plantation Management



Prof. Jagath Edirisinghe

Dean

Faculty of Agriculture and Plantation

Management

Wayamba University of Sri Lanka

It is a privilege for me to write this short message on the 6th occasion of the Wayamba University Research Congress. As the Faculty of Agriculture and Plantation Management, we encourage good quality research and we are happy that Wayamba University is assisting our researchers by organizing this congress for the sixth time. Many researchers and postgraduate students from the Faculty of Agriculture and Plantation Management have presented in the previous versions of this congress and is presenting at this version as well.

Research is the backbone of any developing society. Universities take leadership in research all over the world. The Wayamba University is also taking steps in leaps and bounds in this direction. As a Dean of a Faculty, I am extremely delighted to see this happening. Therefore, I am very much grateful to those who have worked hard towards this successful event. Without their untiring and voluntary efforts, a

congress of this magnitude would not have been possible.

I wish all those presenters who are presenting and showcasing their exciting research in this congress. I sincerely hope that the researches that are presented will get debated, discussed and thereby improved to make a change in Sri Lanka and the whole world.



Message from the Dean Faculty of Applied Sciences



Prof. L. D .R. D. Perera

Dean

Faculty of Applied Sciences

Wayamba University of Sri Lanka

It is with great pleasure that I write this message to mark the Wayamba University Research Congress (WURC) -2021.

Research at universities leads to the creation of new knowledge and innovations, and contributes to the economic development of a country. Wayamba University has also been engaged in this endeavor by promoting research activities through the provision of financial assistance and other opportunities.

The Senate Research and Higher Degrees Committee (SRHDC) pioneered to hold the Wayamba University Research Congress and took a step further to introduce an awards scheme to recognize outstanding researchers of the University. It is highly commendable that the University continues to offer research grants on a competitive basis. University expects that the limited research grants awarded annually are effectively utilized for research projects having relevance to the needs of the

country. It is also expected that the research would be of higher standard and generate new knowledge, and would thereby contribute to the advancement of the Sciences.

The Research Congress provides a platform for the university community, especially the recipients of university research grants and postgraduate students, to present their research findings, share knowledge and receive feedback on their work. It is noteworthy that, with the advice of the Vice-chancellor, the SRHDC lead by its Chairman and amply supported by two dynamic co-chairs are to stage the sixth congress in a restricted mode amidst the current challenging situation.

I wish the symposium every success and congratulate the presenters and the award winners for their achievements.



Message from the Dean Faculty of Business Studies and Finance



Prof. S. K. Gamage

Dean

Faculty of Business Studies & Finance
Wayamba University of Sri Lanka

It's my great pleasure to send this message for the Wayamba University Research Congress (WURC) organized by the Senate Research and Higher Degrees Committee (SRHDC) of the Wayamba University of Sri Lanka.

significant Research is one of the higher education components of which encompasses with creation and dissemination of novel intellect to ensure the advancement of social human beings. During this year, conducting research studies by the staff and the students was a huge challenge due to the pandemic of Covid 19. In spite of the travel and many other restrictions under the health guidelines, continuation of research studies by the university staff and the students is highly admirable.

The Wayamba University Research Congress provides a common platform for the academia, researchers and scholars to acquire new knowledge and to exchange and share their experience and findings of the research results and

innovative ideas in the multidiscipline research potentials and it also encourages the staff and postgraduate students of the Wayamba University of Sri Lanka to publish their research papers in highly accepted journals and other publication conferring awards for the most outstanding researchers and most outstanding young researcher to recognize their quality works.

I gratefully appreciate the Chairman of the Senate Research and Higher Degrees Committee, and the Co-chairs and members of the Wayamba University Research Congress for organizing this great event in this year too in spite of the obstacles under the prevailing situation of the pandemic.

Finally, I congratulate and convey my best wishes to all the presenters, awardees and participants for a successful research congress.



Message from the Dean Faculty of Livestock, Fisheries, and Nutrition



Prof. (Mrs) C. V. L. Jayasinghe

Dean

Faculty of Livestock, Fisheries and Nutrition

Wayamba University of Sri Lanka

I am delighted and honoured to convey this message to the Wayamba University Research Congress- 2021.

In the era of 'the fourth industrial revolution', technology and innovations were envisaged as the key drives to achieve the competitive advantage and have become a distinctive feature of businesses globally. The beginning of this decade is unique to the world with the outbreak of Covid-19 pandemic and subsequent backlash to the country's economy and the social life styles. The food manufacturing industry was highly affected and showed remarkable negative influence on our economy and food security too. Researchers have proven that managing sustainable advantage competitive through technology and innovations can provide influential strategies to ensure the global food demand and overcome proper service delivery to the community. It is therefore essential to have a realistic vision and practical approaches to the

management of sustainable competitive advantage through innovative ideologies with resource based view attributes such as uniqueness, distinct value, exclusivity, non-substitutability, environmental sustainability and social responsibility.

Wayamba University research teams also execute research studies focusing on this theme and successful stories are showcasing today. Thus, I would like to extend my sincere gratitude and congratulations to the presenters and I sincerely hope that this congress will be enriching novel ideas that will lead to a better, merrier and prosperous country.

I wish the Wayamba University Research Congress -2021 a great success.



Message from the Acting Dean Faculty of Technology



Dr. I. P. M. Wickramasinghe

Actg. Dean

Faculty of Technology

Wayamba University of Sri Lanka

It is a great pleasure for me to share this message at the 6th Wayamba University Research Congress. This year's theme "Sustainable Competitive Advantage through Innovative Research Ideologies" is highly suitable to address the need of the hour. A coordinated effort by all sectors is essential to mitigate the economic impact of the Covid-19 pandemic. Continuous research and development should be a key strategy for winning market competitions again for Sri Lankan products. Sharing and refining research findings through this kind of forums are essential to uplift the quality and relevance of research.

The Faculty of Technology of Wayamba University is now reaching its maturity and is getting ready to produce the first batch of graduates in the year 2021. The Faculty is expected to play crucial role in the technology education, research and development for the country. It is an immense pleasure for me to note that numbers of research outcomes of

the Faculty are to be presented in the Congress this year.

I hope that the Research Congress will provide a conducive forum for the researchers of the University to showcase their findings and to receive feedback. I offer my best wishes for the 6th Research Congress of the Wayamba University of Sri Lanka to be a successful event.

Thank you.



Message from the Co-Chairs of the Wayamba University **Research Congress 2021**



Dr. Kumara Uluwatte Co-Chairs (WURC 2021) Wayamba University of Sri Lanka



Dr. Asanka D. Dharmawansa Co-Chairs (WURC 2021) Wayamba University of Sri Lanka

Wayamba University Research Congress 2021 as Co-chairs.

Wayamba University Research Congress creates a platform for our staff and postgraduate students to disseminate the findings of their research work to a wider community. This sixth Research Congress of the Wayamba University of Sri Lanka plans to conduct nine research and development in the theme of "Sustainable Competitive Advantage through Innovative Research Ideologies". We wish that this event will be helpful for all researchers in the University to showcase their findings through research publications and presentations. We sincerely hope that all participants

It gives us immense pleasure and would gain as much as possible from honor to write this message to the sixth the intellectual discourses planned throughout the event.

We would like to express our utmost appreciation to all steering and working committees for making this event a success. The publication of research abstracts of this conference would not be possible without the critical assessments and feedback from the appointed reviewers. We hereby wish parallel sessions to cover all areas of to convey our sincere gratitude to all of them. Finally, We would like to express our sincere gratitude and appreciation to the keynote speaker, session chairs, members of the organizing committees and conference participants who have contributed and participated to make this conference a successful one.



The Summary of the Keynote Speech



Abstract

This study explores the challenges of introducing Equity crowdfunding platforms in Sri Lanka. Under the policy of moving the country toward the vision to make Sri Lanka a digitally inclusive country, the Sri Lankan government has placed importance on a valuebased and innovation-driven economy. Sri Lankan government plays a key role in building a crowdfunding platform to provide entrepreneurial finance for start-ups. The findings indicate the barriers both at the policy and operation levels underlying the Sri Lankan financial innovation systems jut introduction level. Further provides insightful lessons and implications to strengthen the crowdfunding platform for promoting knowledge-intensive economic growth.

Introduction

The crowdfunding industry in Sri Lanka is yet very underdeveloped in comparison to other countries. There are only a few platforms existing and most of them are reward- or donation-based. However, crowdfunding can be seen as an alternative source of funding for small and medium enterprises (SMEs), since

"Challenges of Introducing Equity Crowdfunding in Sri Lanka"

Senior Prof. Kennedy D Gunawardana

Senior Professor in Accounting
Department of Accounting
Faculty of Management Studies
and Commerce, University of Sri
Jayewardenepura

the banks in Sri Lanka have tightened the criteria for lending in the recent years, however, more relaxation was provided during the pandemic period, but not recorded significant growth rate.

The importance of these SMEs for the Sri Lankan economy is vast as they contribute about 52% to the GDP and are considered as the backbone of the economy. In Sri Lanka it is estimated that the MSMEs accounts for over 90% of the total enterprises in the non-agricultural sector and 45% of the total employment. Therefore, crowdfunding in Sri Lanka (SL) might gain in importance within the next couple of years in order to ensure proper financing of the drivers of growth in the SL economy, which are the SMEs.

Current Situation

Crowdfunding is accepted as a viable alternative source of financing for start-up ventures. Typically a pool of investors' funds a venture via an Internet platform expecting a monetary or non-monetary return. This is a popular method of fundraising for small ventures in developed contexts to solve funding problems. In Sri Lanka, there are very limited financing sources available for entrepreneurs to initiate their business



ideas. Banks dominate financial markets but these are not readily accessible to small entrepreneurs due to the latter's lack of financial history. As a solution for funding small businesses, crowdfunding potential in such contexts. Accordingly, this report investigates the current conditions for introducing crowdfunding as a source of finance in terms of technology, entrepreneurial culture, regulatory background, and community engagement. A survey for self-assessment of readiness and indepth interviews were used to identify readiness, challenges, and barriers for introducing crowdfunding in Sri Lanka. The readiness index shows the need for further revision of financial and economic regulation for implementing crowdfunding in the economy. However, overall investigation provides the evidence that crowdfunding would not be implemented properly in the economy without regulations that create trust among both entrepreneurs and investors.

The Securities and Exchange Commission of Sri Lanka

The Securities and Exchange Commission of Sri Lanka is the primary financial markets regulator. The Sri Lankan SEC was first established under Securities and Exchange Commission of Sri Lanka Act No. 36 of 1987, and is the main regulator of the Colombo Stock Exchange (CSE), as well as Stock brokering firms and brokers directly. The entity also regulates financial market intermediaries, well as publicly listed companies and agencies providing ratings services. While no formal guidance has been offered by the Sri Lankan Securities and Exchange Commission, given the regulatory apparatus in effect, it is evident that crowdfunding as a discrete activity is unlawful under the Securities Act (2008) and the Securities Exchange Commission Act (2007).

The Securities Act (2008) is modelled on judicial pronouncements from the UK. In respect to the matter of the legality of crowdfunding within Sri Lanka the following is pertinent. A crowdfunding initiative that merely procures gifted or donated sums without the possibility of a return may not be considered unlawful under the Securities Act (2008). This factor is amongst the most pertinent, the nature of the reward provided by the project promoter would be critical to whether an initiative would be considered unlawful. The nature of the reward offered and the structure of the crowdfunding offering would determine whether the arrangement would require licensing, and whether it constitutes a managed investment scheme pursuant to the Companies Act, or whether it constitutes a fundraising activity under the Companies Act.

Trends in Crowdfunding

Transaction value in the Crowdfunding segment is projected to reach US\$1.7m in 2021. Transaction value is expected to show an annual growth rate (CAGR 2021-2025) of 9.92% resulting in a projected total amount of US\$2.5m by 2025. The average funding per campaign in the Crowdfunding segment amounts to US\$15,048 in 2021. From a global comparison perspective it is shown that the highest transaction value is reached in the United States (US\$537m in 2021).

Challengers and Barriers

The report brings to light impediments from 12 categories faced by startups including issues relating to Foreign Exchange, Barriers to Foreign Investors, Intellectual Property, Taxation, Immigration, R&D, Government Support for Cross Boarder Activities, Data Privacy & Cyber Security, Digital Payments, Financing, Telecommunication Debt Regulations, Digitalization of



Administrative Tasks and suggests 44 actions to resolve these impediments by working together with government authorities, who are in charge of respective sectors.

As the catalyst in driving the ICT sector including the tech startup ecosystem forward, ICTA pioneers in all ICT related projects implemented by the government and is in the process of supporting the growth of the tech industry. With its vision to make Sri Lanka a digitally inclusive country, ICTA strives to empower tech startups via several initiatives such as StartupSL, Alternative Credit Evaluation Framework for Tech Companies, Spiralation, etc. ICTA expects to support the startup ecosystem development in the long run by creating a conducive environment for the tech startups to thrive with the aim to see new globally scalable tech businesses emerging in Sri Lanka

Role in the Country's National Innovation System

ICTA plans and implements all ICT projects funded by the Sri Lankan government. The ICT industry has national goals of achieving US\$ 5 billion in revenue, a 200,000-person IT workforce, and 1,000 start-ups by 2022. ICTA is involved with developing the IT industry, digitizing the government, developing the digital infrastructure (Lanka Gate), training and building ICT capacity, creating policy proposals, and also ensuring the security of Sri Lanka's ICT systems.

Crowdfunding is a financial innovation which will undoubtedly grow in leaps and bounds in the future. The concept of crowdfunding is relatively new to Sri Lanka. The size of the crowdfunding industry in Sri Lanka is estimated to be about \$ 100,000 to \$ 500,000 in 2015 (Robert Wardrop).

Loan-based crowdfunding may

amount to accepting public deposits which requires such entities to seek registration/licensing with the Central Bank. Equity crowdfunding requires a private company to seek public investors which runs counter to the provisions of the Companies Act.

These legal concerns may have to be addressed if the crowdfunding industry in Sri Lanka is to be nurtured and developed. Crowdfunding is an industry which should be fostered in Sri Lanka but the proper regulatory framework is vital to protect investors in crowdfunding.

Inequitable access to finance has been identified as one of the barriers to economic growth in the Vision 2025 of the Government of Sri Lanka which has also identified peer to peer (P2P) lending as an area in which innovation is encouraged subject to relevant oversight.

Discussion with Stake holders

Crowdfunding is the practice of funding a project or venture by raising small amounts of money from a large number of people. Although the Internet has made it easier in recent years, crowdfunding as an idea has been around for much longer.

and Sri Lankan non-profit organizations are olicy increasingly turning to crowdfunding urity methods, for a fundraising platform set up to fill the funding deficit that many local NGOs faced due to dwindling international donor agency support. Its focus is deserving causes in the cept areas of children, youth education of Sri and empowerment. Some charities ding have long been crowdfunding through the conventional means of phone calls or mass mailers. SOS Children's Villages and HelpAge Lanka are among those that engage in such fundraising. One may way technology can help charities to



raise funds from the public is through partnerships with telecom companies. Recognized charities can arrange for people to donate seamlessly through mobile phones. It can be either cash or other means – such as 'star points' that users have accumulated in retail transactions. Currently, around 20 charities in Sri Lanka use this option, but it can succeed only if the charity publicizes this extensively in the media and/or social media platform.

Despite these challenges, crowdfunding – online and offline – is set to grow, and early adopters stand to reap dividends. In the long term, however, our society's attitudes on philanthropy will shape how well crowdfunding can work in Sri Lanka. Enabling laws and regulations can nudge us in the right direction.

Crowdfunding existed long before the word, and is exactly what it sounds like: lots of people pledging little bits of money. The model was popularized by creative people without capital for album recordings or freeware creation: Pledge \$5 to a project and get an autographed album for free.

Equity crowdfunding is a slightly different game. It is less simple, and involves a little more money and a lot more risk. Aspiring investors with limited experience in shareholding and not so many cash to throw around start here, while giving a leg-up to startups looking for leverage to scale.

"There is a fair amount of money available to be invested, and there are deserving startups," Chief Executive of Crowdisland Shehan Ramanayake says of Sri Lanka, "and a crowdfunding platform is a nice digital solution to bring investors and entrepreneurs together."

Crowdisland was founded by Jeevan Gnanam and Nathan Sivagananathan,

who are both very involved in the startup scene, in collaboration with boutique financial advisory and investment banking firm York Street Partners. What it proposed was to fill this new space in the startup market and open the economy to many more players with less buying power than the usual investor: the democratization of capital.

The point of equity crowdfunding is to provide alternative capital to those who are not likely to secure funds through more traditional methods (like bank loans or stock sales), while crafting some wins for investors. First, an easily accessible online public platform for pitching projects gives investors a larger pool of options to choose from, helping create a diversified investment portfolio. Second, it retains the high reward of startup investment, while dissipating the high risk across a multitude of investors. If things went according to plan, an executive with some savings would create an "investor" account on the Crowdisland platform and top up an account with maybe Rs1 million. When he found a project to invest in, the account would be debited by the amount he chose to pledge. The project would get capital and the investor would get shares.

Ideally, PayPal would handle Crowdisland transactions, but the Central Bank doesn't allow the service provider to facilitate receipt of payments to Sri Lankan businesses. So they opted for the usual credit/debit card payment, which brought them right up against another policy: credit cards can be used only for purchasing goods or services, not securities, because of the risk it entails of pledged investors defaulting. In Ramanayake's words, their idea is scalable, "but it requires several parties to come together and figure out a way to help this mechanism come to fruition".

Even if a payment gateway was negotiated



and investors were able to create accounts they could credit and debit as they like, Crowdisland still has a long way to go before they become what Ramanayake calls "pure crowd". Section 311 of the Securities Council (Amendment) Act, No. 26 of 1991 prevents private companies from "inviting the public to invest" in them, and the Companies Act, No. 07 of 2007 requires that private companies "limit the number of its shareholders to fifty".

In other words, there are still a lot of ways that crowdfunding is technically illegal in Sri Lanka. Former Deputy Foreign Affairs Minister Dr. Harsha de Silva indicated at the launch of Crowdisland in February that the government is interested in making amendments to the legislation in light of the changing marketplace. But legislature is a sloth to the mushrooming startup ecosystem, and the volatile nature of the startup environment requires that any such amendments will need to include more effective systems than we currently have to protect stakeholders. Silicon Valley startups have a friendlier legal framework to do business in, but even the JOBS (Jumpstart Our Business Startups) Act of the US SEC imposes limitations on the size of individual investments made.

Crowdisland founders Jeevan Gnanam, Sivagananathan Street Partners understand the risks startup investments entail. Gnanam has entrepreneurism written in his genes, and uses his experience as head of Orion City IT Park, Anton and a number of other businesses including startups to mentor young entrepreneurs through SLASSCOM and similar groups. Echelon's 40 under 40 no. 1 Sivagananathan, Chief Executive at MAS Holdings and a board member in a number of its subsidiaries, is known for innovating operations at the organization. York Street Partners is a five-year-old financial advisory and investment banking firm pledging 50

years of experience between its partners and making itself known in high-profile investor circles. The three combined immediately establish the viability of the deals on offer at Crowdisland.

Therefore, "[less-experienced] investors are able to make a justifiable assumption that these listings are smart investments", Ramanayake says, allowing them to be "slightly more detached from the actual business" than a regular investor. "This is not to say the investors are not responsible for their due diligence," he adds, "but there is a level of credibility afforded to the startups, which is helpful for [investors] not too well established in the startup investment scene."

This is a logic not unlike the disclaimers strewn across the Crowdisland website. They are very clear that startups will fail, that investors must understand the risk involved, and that Crowdisland is only a platform for investors and startup founders to find each other, and not a financial advisor.

How the website helps less-experienced investors than the founders is by creating a mechanism for filtering the startups that get advertised. The same mechanism also helps startups improve their proposals. "If you have to have a few paying customers and a validated model," Ramanayake explains, "this is a good way to reach a large audience. We are not someone to back your untested idea." Startups that are ready to scale sign up for "entrepreneur" profiles on Crowdisland and create "deals" including information on the company and the funds they are seeking. Crowdisland will look at this information and make recommendations to the entrepreneur. These recommendations may include a referral to York Street Partners for "credible valuations". "We are not going to tell you what the value of your company is," Ramanayake clarifies, "but you need to be able to defend the numbers you are proposing."



Once the recommended revisions have been made, Crowdisland puts the startup on their platform and makes the individual deals visible to registered investors. Investors make their pledges, and if the drive hits the target, Crowdisland keeps six percent of the total fund.

Because of SEC regulation, Crowdisland currently has a cap on how many investors can pledge towards a single project, and final transactions take place offline, with face-to-face meetings, real checkbooks and signatures on legal documents.

At the end of the line, Crowdisland manifests as a small group of people moving large amounts of money: in effect, a private investors' club. But they insist on calling it "crowdfunding" because Crowdisland plans to be right up at the front of the line when the laws become more startup and online-transaction friendly. But as Ramanayake sees it clearly, "there is a lot to do" before they can get there.

Case Study

Mathi Sutha is a young accountant who is pursuing his career in accounting as a full-time work. He is born in Jaffna in off city village "Udupiti". He is a person who is interested in arts and sports. His passion in always exploring his artistic views as into videos. With the enthusiasm and passion in making real life incidents as a story to tell this world, he started his film production journey in 2011. In 2014, he registered his business entity as a sole proprietorship.

"None of the financial institutions or banks are ready to finance the innovative film makers" he points out his disappointments over the Sri Lankan financial system. He wanted to make film with 50 Lakhs where no one has supported to fund the project. He faced

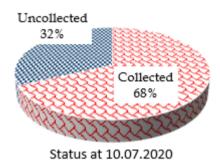
rejections and heartbreaks in showcasing his talents.

He says "It was not very easy to be in this industry without funds. Sri Lanka is of a country where there are no producer director relationship survives". These things made him to be pursue his dreams with crowdfunding method. Being the individual artist with 28 accolades, he has created 8-page project summary report on "Dark days of heaven- Venthu thanithathu kadu" to convince the investors. "I have used my social media platforms to raise funds rather than going through crowdfunding websites like Kickstarter and Indiegogo as 10% of the funds will be taken by the websites". He has used his knowledge on accounting to make this funding effective method. A rational investor would not expect to lose his money on film production. He has split of Rs.1000/- shares each for 2850 shares. If an investor purchase one share per Rs.1000/- it would not cost a huge loss in future if the project were not successful.

He has started this project in January 2018 and currently project in last stages where post production work is going on. "Freedom is the one of the keys in choosing crowd funding. I have whole freedom to spent the money on my requirement for the project. I have promised to submit the accounts after the film releases". It was not very easy at the beginning for him to raise funds but the confidence and trust he had on his work made him to pursue his passion. He has successfully collected Rs. 20 Lakhs which is less than that target of Rs. 28 Lakhs. "If we see in that point of view, crowdfunding is a failure concept but it is very suitable for art and sports activities, I could manage myself since the shortfall was required for the promotional activities, but it is certain that I can collect that fund through crowdfunding as well"



Stages	Amount	% of total budget
Preproduction	100,000	4%
Production	850,000	30%
Post production	900,000	32%
Distribution	1,000,000	35%
Total	2,850,000	



Anyone would have affected during the Covid-19 pandemic where his fund collection was slow during covid." I would have collected more funds and finish this project earlier if there are no Covid situation". He proudly says, "it's not my film and it's our film" He suggests that there are lot of youngsters in sports and arts field who need funds. This crowdfunding is most suitable for any researcher's example: who like to pursue research on organic and inorganic fertilizes. This funding method is suitable for agricultural oriented startups, research.

Mathi Sutha says, "I think there should be better opportunities to the fields of film production and sports through this crowdfunding in Sri Lanka. There are no any special loans given by any institutions for film production and these talents should be encouraged in future to uplift the young talents".

Conclusion

Commercial banks do not lend easily to those who still have no, or limited, credit record, and venture capital is not readily

available for small-scale investment in new businesses, particularly in developing countries and non-IT enterprises. Shortand long-term loans, especially from commercial banks, are the predominant form of financing for SMEs. Short-term loans are the most common form of bank loans for start-ups and small businesses. as commercial lenders are generally less willing to take large risks with new companies. In general, the sources of short-term financing for SMEs include a line of credit, promissory notes, other short-term banking instruments (e.g., overdrafts) and loans from other financial companies. Short-term financing is easier to arrange, has lower costs and is more flexible than long-term financing. However, short-term financing is more vulnerable to interest rate swings, requires more frequent refinancing and requires earlier repayment. SMEs tend to rely angels, venture capital and initial public offerings (IPOs).

Asset-based financing is also used by SMEs whereby funds are obtained by pledging part of the firm's assets as collateral or as the primary source of repayment. The most common types of asset based financing are factoring, discounting and inventory financing. Additionally, SMEs often use leasing as a way to financing new equipment like machinery or motor vehicles. The lack of venture capital and equity financing options for Sri Lanka are said to compel SMEs to depend mostly on bank loans or informal sources.





Inaugural Ceremony			
08.30 a.m.	Registration		
09.00 a.m.	Lighting the Traditional Oil Lamp		
09.10 a.m.	University Anthem		
09.15 a.m.	Welcome Address Dr. Kumara Uluwatta (Co-Chair, WURC 2021)		
09.25 a.m.	Address by the Chairman, SRHDC: Dr. W.A.S. Wijesinghe		
09.35 a.m.	Address by the Chief Guest: Dr. Sanjeewa Bowatte The Acting Vice-Chancellor Wayamba University of Sri Lanka		
09.50 a.m.	Keynote Speech: Senior Prof. K D Gunawardana Faculty of Management Studies and Commerce University of Sri Jayewardenepura		
10.20 a.m.	Awarding of 'Wayamba University Research Awards'		
10 .30 a.m.	Vote of Thanks: Dr. Asanka D. Dharmawansa (Co-Chair, WURC 2021)		
10.40 a.m.	National Anthem		
10.45 a.m.	Tea Break		
02.00 p.m.	Parallel Technical Sessions (online)		



Session A - I : Agricultural Biology and Biotechnology

Session Chairs: Dr. KM Mewan Dr. (Ms). KMGK Pamunuwa		Coordinator: Ms. Achini Dewagedara 071 720 9013	Time: 02.00 pm - 04.30 pm
Time	Paper ID	Title of the Paper	Author/s
02.00 – 02.15 pm	12	Odoriferous Compounds of <i>Vanda tessel</i> - <i>lata</i> (Roxb) Hook. f. ex D.Don. and Their Possible Ecological Role in Attraction of Pollinators	R.S. Gunasekara* K. Yakandawala S. Jayakody D.S.A. Wijesundara R.M. Dharmadasa
02.15 – 02.30 pm	19	Screening Antibacterial Activity of Fresh Leaves of Selected Fruit Trees Grown in Dry Zone in Sri Lanka	W.M.W.W. Kandegama* K.W.M.D. Kamathewatta
02.30 – 02.45 pm	33	Application of Next Generation Sequencing to Reveal Salinity Stress Related Candidate Genes in Two Sri Lankan Rice Varieties	B.P. Abhayawickrama* D.R. Gimhani V. Herath N.S. Kottearachchi
02.45 – 03.00 pm	36	Formulation of a Commercializable Stevia Incorporated Herbal Tea Using Superior Quality Stevia Leaves for the Benefit of Diabetic Patients	E.G.D. Ranasinghe* D.C. Abeysinghe R.M. Dharmadasa*
03.00 – 03.15 pm	38	Morphological Variation of Arrowroot (<i>Ma</i> - <i>ranta arundinacea</i>) from Six Geographical Locations of Sri Lanka	M.K.S. Malki* J.A.A.C. Wijesinghe R.H.M.K. Ratnayake
03.15 – 03.30 pm	56	Optimization of an <i>in vitro</i> Clonal Propagation Technique for Mass Cultivation of <i>Stevia rebaudiana</i>	P.S. Warakagoda* S.S Millavithanachchi R.G.G.M.D. Jayasundara
03.30 – 03.45 pm	78	Study of Anthocyanin, Proanthocyanidin Content and Antioxidant Properties of Traditional Red Rice Varieties	D.A.U.H. Perera H. R.M.G.C. Thilakarathna D.R. Gimhani* J.A.A.C. Wijesinghe N.S. Kottearachchi
03.45 – 04.00 pm	79	Genetic Diversity within <i>Saccharum offici</i> - <i>narum</i> Accessions Collected in Sri Lanka	<u>A.M.M.S. Perera*</u> D.P.S.T.G. Attanayaka A. Wijesuriya
04.00 – 04.15 pm	88	Screening for Cyanotoxin Producing MC Genes in Cyanobacteria Species Inhabit- ing in Paddy Fields and Wastewater Ponds	B.L.W.K. Balasooriya* H.K.T. Dinushka R.P.U.I. Amarawansa
04.15 – 04.30 pm	92	Morphometrics and Species Limits of Ornamentally Important Aquatic Genus Lagenandra	I. Madola* K. Yakandawala D.M.D. Yakandawala S. Karunaratne



Session A - II : Agricultural Economics and Life Style Agriculture			
Session Chairs: Prof. (Mrs.) NR Abeynayake Dr. (Mrs.) Kusum Wijesinghe		Coordinator: Ms. Nadeera De Silva 077 727 2282	Time: 02.00 pm - 04.00 pm
Time	Paper ID	Title of the Paper	Author/s
02.00 – 02.15 pm	21	An Assessment of the Total Factor Productivity Growth in the Corporate Tea Sector: A Stochastic Frontier Approach	<u>K.R.H.MRanjan</u> * J.C. Edirisinghe
02.15 – 02.30 pm	28	Interrelationships between the Operational Context of Key-Performance Indicators and Performance of a Research Institute: Evidence from the Commercial Agriculture Sector in Sri Lanka	P. C. Abeysiriwardana* U.K. Jayasinghe Mudalige
02.30 – 02.45 pm	49	An Analysis of Drought Incidences in the Coconut Plantations in Wet Zone	A.D.K.S.S. Somarathna* J.C. Edirisinghe*
02.45 – 03.00 pm	54	The Influence of Socio Demographic Factors on the Maintenance Quality of Urban Residential Gardens in Gampaha District	<u>J.K.W.N. Subashini*</u> K. Yakandawala* E.S. Minor
03.00 – 03.15 pm	57	Raising Effective Use of ICTs in Agricultural Extension: Technology Stewards' Responses to Stewardship Training Program in Sri Lanka	H.A.C.K. Jayathilake* U. Dissanayeke J.M.U.K. Jayasinghe-Mudalige J.C. Edirisinghe H.M.L.K. Herath, L.M.J.K. Lindara
03.15 – 03.30 pm	69	Coconut Growers' Knowledge and Perceptions on Climate Change and Adaptation Strategies: Evidence from Coconut Growers in Coconut Triangle of Sri Lanka	<u>Ruvani S.W. Godage*</u> B. Gajanayake*
03.30 – 03.45 pm	73	Recreationalists' Willingness to Pay for Conservation: Implications for Sustainable Management of Marine Resources	J. M. M. Udugama* T. P. S. R. Guruge W.D.D.A. Jayamanna
03.45 – 04.00 pm	74	Enhancing the Awareness and Perception in Smallholder Rubber Farmers Towards Recommended Technologies: Evidences from Four Rubber Growing Districts	B. M. D. C. Balasooriya* J. C. Edirisinghe P. Seneviratne



Session A - III : Agricultural Engineering and Technology			
Session Chairs: Prof. K.S.P.Amarathunga Prof. NGJ Dias		Coordinator: Mr. IV Kuruppu 0716393775	Time: 02.00 pm - 03.45 pm
Time	Paper ID	Title of the Paper	Author/s
02.00 – 02.15 pm	23	Biofilm Biofertilizer Increases Soil Carbon Sequestration in Tea and Paddy Cultiva- tions	A.P.D.A. Jayasekara* M. Premarathna D.C. Abeysinghe G. Seneviratne*
02.15 – 02.30 pm	24	Design, Development, and Performance Evaluation of a Camera Integrated Height- Adjustable Device for Harvesting Black Pepper (<i>Piper nigrum L.</i>)	E.J. Kosgollegedara* H.A.W.S. Gunathilaka G.V.T.V. Weerasooriya
02.30 – 02.45 pm	31	Multispectral Imagery Assisted Drone Technology to Measure Leaf Chlorophyll Concentration in Rice (<i>Oryza sativa L.</i>) Crop Field in Sri Lanka	P. P. Dharmaratne* A.S.A. Salgadoe W.M.U.K. Rathnayake A.D.A.J.K. Weerasinghe D. N. Sirisena W. M. N. Wanninayaka
02.45 – 03.00 pm	34	Performance Evaluation of a Sub Surface Drip Irrigation System in a Coconut Culti- vation	H.A.W.S. Gunathilake* K.P.S.A. Silva
03.00 – 03.15 pm	61	Enhancement of Soil Chemical Properties and Crop Performance by N-enriched Co-compost Pellets in Maize (<i>Zea mays</i> L.) Cultivation	A.W.S. Pushpakumara* W.J.S.K. Weerakkody B. Ranaweera K.H.M.I. Karunarathne
03.15 – 03.30 pm	66	Development and Testing of an IoT Assisted Volumetric Soil Moisture Sensor Network as a Solution to Groundwater Depletion and Pollution Issues in Kalpitiya, Sri Lanka	A.H.M. Nipuna Chamara* I.J. Amadoru*
03.30 – 03.45 pm	76	Downward Movement of Nitrogen and Potential Contamination of Shallow Groundwater under Sandy Regosols in Kalpitiya: A Case Study on Red Onion Cultivation	D.S.G.G.C. Swarnathilake* H.M.I.K. Herath* D.R. Gimhani N.W.B.A. L. Udayanga J.C. Edirisinghe



Session B : Applied Sciences				
Session Chairs: Prof. Pubudu Samarasekara Dr. Hemalika TK Abeysundara		Coordinator: Ms. UADN Anuradha 071 705 4570	Time: 02.00 pm - 04.00 pm	
Time	Paper ID	Title of the Paper	Author/s	
02.00 – 02.15 pm	13	Analysis of an Electrochemical Double Layer Capacitor with 1-butyl-3-methyl- imidazolium bis(trifluoromethylsulfonyl) imide-based Gel Polymer Electrolyte and Natural Graphite based Electrodes	R.M.L.L. Rathnayake* G.A.K.S. Perera* K.P. Vidanapathirana*	
02.15 – 02.30 pm	15	Cyclic Voltammetry Study of Exfoliated Graphite/Polyaniline based Solid State Hybrid Capacitor	D.S.K. Rajaguru* K.P. Vidanapathirana* K.S. Perera*	
02.30 – 02.45 pm	20	Continuous Cycling Performance of a Mg Rechargeable Cell with a Natural Rubber based Electrolyte	H.G.N. Rajapaksha* K.S. Perera* K.P. Vidanapathirana*	
02.45 – 03.00 pm	30	Design of a Low Power and High Efficient Rectifier Circuit for Microcontroller based RFID Application	P.M. Senadeera* J.M.J.W. Jayasinghe* W.A.S. Wijesinghe*	
03.00- 03.15 pm	42	Design and Simulation of a Printed Dipole Antenna with double T-match structure for Passive UHF RFID Tags	W.M.S.M. Wickramasinghe* J.M.J.W. Jayasinghe* P.M. Senadeera*	
03.15- 03.30 pm	55	Performance of Linear Regression Estimators in the Presence of Multicollinearity and Autocorrelated Errors: A Simulation Study	P.M.O.P. Panahatipola* S.P. Abeysundara*	
03.30- 03.45 pm	83	A Novel Method to Find the Principal Square Root of any Perfect Square	J.K.C. Lorence P.M.N. Dharmawardane*	
03.45 – 04.00 pm	93	Awareness of the Right to Information Act (Ria) in Sri Lanka among the University Students: A Survey Conducted Among the Undergraduates of the Wayamba University of Sri Lanka	<u>W.A.D. Chithrananda*</u> S.A.R.R.P. Dissanayake	



Session C - I : Food and Nutrition				
Session Chairs: Dr. PMHD Pathiraje Dr. Thilanka Ranatunga		Coordinator: Mrs. Uthpala Adhikari 077 388 1346	Time: 02.00 pm - 04.15 pm	
Time	Paper ID	Title of the Paper	Author/s	
02.00 – 02.15 pm	16	Changes in Carbohydrate Composition and Functional Properties of Three Millet Species; Panicum millaceum, Paspalum scrobiculatum and Setaria italica as Affected by Germination	N. N. G. Chiranthika* K. D. P. P. Gunathilake A. Chandrasekara	
02.15 – 02.30 pm	18	Effect of Germination on Physicochemical and Functional Properties of Legume Seed Flours of Canavalia gladiata and Mucuna pruriens	H. A.C.O. Hettiarachchi* K.D.P.P. Gunathilake* S. Jayatilake	
02.30 - 02.45 pm	22	Development of an Educational Curriculum for Self-Management of Type 2 Diabetes	H.P. Gunawardena* B.M. Bandara N.V.S. Dharshika A. Chandrasekara	
02.45 – 03.00 pm	26	Phenolic Content and Antioxidant Activities of the Ready to Serve Canned Herbal Beverage	H.S.S. Sandeepani A. Chandrasekara* G.A.P. Chandrasekara	
03.00 - 03.15 pm	29	Curriculum Analysis and Development of a Validated Tool to Measure Food Literacy Level of Secondary School Children	M.P.S. Rathnayake* J. Nanayakkara T. Perera, T. Worsley A. Booth K.D.R.R. Silva	
03.15 – 03.30 pm	41	Characterization of Physicochemical and Volatile Compounds in the Ethanolic Extract of Syzygium cumini (Indian Blackberry) Oleoresin	M. Madhusankha* C. Jayasinghe N. Perera*	
03.30 – 03.45 pm	60	The Coexistence of Dual Burden of Malnutrition in Mother-Child Pairs in Urban, Rural and Estate Sectors in Sri Lanka	T. Joshepkumar* K.D.R.R. Silva J.M.U.K. Jayasinghe	
03.45 – 04.00 pm	70	Occurrence and Distribution of Geometric and Positional Fatty Acid Isomers in Processed Edible Plant Lipids	H.P.S. Senarath* A.P.M. Perera E.M.R.K.B. Edirisinghe J.M.Y.V Jayasinghe C.V.L. Jayasinghe	
04.00 – 04.15 pm	72	Dietary Saturated and Unsaturated Fatty Acids Intake among Sri Lankan Adult Men	U.L.D.S Perera* M.A.R.M.P Jayathilake, M.G.N Sewwandi A. Chandrasekara K.M Rathnayake	



Session C – II : Food Production Systems				
Session Chairs: Prof. Gamika Prathapasinghe Dr. AGSS Darshani		Coordinator: Ms. D Abeygunawardana 077 928 6555	Time: 02.00 pm - 04.1 5 pm	
Time	Paper ID	Title of the Paper	Author/s	
02.00 – 02.15 pm	40	Effect of a Cocktail Enzyme on the Digest- ibility and Nutritive Value of Conventional Poultry Feed Ingredients	A. Jayaweera A.G.U.R. Amarasinghe S. Manopriya* J.M.K.J.K. Premarathne M.N.M. Nisthaj	
02.15 – 02.30 pm	45	Elephant Movements Around Maduruoya National Park; Importance of Elephant Corridors	A.S.C. Wilson* U.K.G.K. Padmalal* S. Jayakody*	
02.30 – 02.45 pm	48	Is There an Enabling Environment for Nutrition-Sensitive Food Production in Sri Lanka?: Perception of Various Stakehold- ers	K.A.C. Madumali* A. Chandrasekara K.D.R.R. Silva*	
02.45 – 03.00 pm	64	Effects of Preheating Time on Yield and Quality of Fish Oil Extracted from the Wet Reduction Process	K.P.C. Lakmini S.T. Gonapinuwala C.A.N. Fernando I. Wijesekara M.D.S.T. de Croos*	
03.00 – 03.15 pm	65	An Approach to Minimise Energy and Chemical Usage in Chitosan Extraction	C. S. Liyanage S. T. Gonapinuwala C. A. N. Fernando M.D.S.T. de Croos*	
03.15 – 03.30 pm	75	Cost of Jellyfish: Human Well-Being, Impacts and Local Remedies from Sri Lanka	K. D. Karunarathne* M. D. S. T. de Croos*	
03.30 – 03.45 pm	81	Efficacy of Organic Amendments Against Root Knot Nematodes (<i>Meloidogyne</i> spp.) In Sweet Potato	P. Upamali S. Peiris* Chengyuan Xu Philip Brown Yu-juan Li	
03.45 – 04.00 pm	89	An Alternative Approach to Simplify the Traditional Purification Step of Collagen Extraction Protocol	A.G.D.M. Ampitiya* S.T. Gonapinuwala C.A.N. Fernando M.D.S.T. de Croos	
04.00 – 04.15 pm	90	The Economic Impacts Realized by Giant Freshwater Prawn Exporters in Sri Lanka During the COVID'19 – Pandemic	D.S. Digamadulla U.K. Jayasinghe-Mudalige W.M.H.K. Wijenayake U.S Amarasinghe M.D.S.T. de Croos*	



Session D : Management				
Session Chairs: Prof. Aminda M. Perera Prof. RA Rathnasiri		Coordinator: Mr. SMRK Samarakoon 070 270 4813	Time: 02.00 pm - 04.15 pm	
Time	Paper ID	Title of the Paper	Author/s	
02.00 – 02.15 pm	5	Does Ownership Diversity Affect Firm Perfor- mance? Evidence from Non-Financial Firms Listed in Colombo Stock Exchange	M.M.S.K.B. Bogamuwa* K.L.W. Perera	
02.15 – 02.30 pm	17	Anxiety During Strategic Impromptu Speaking among Adult Second Language Learners	W.S.A. Fernando*	
02.30 – 02.45 pm	39	Best Practice Reference Model to Evaluate Logistics Service Providers in Terms of Adopting Lean Management and Sustainability Practices	A. Edirisuriya* S. Weerabahu* R. Wickramarachchi*	
02.45 – 03.00 pm	46	Key Themes in Corporate Sustainability Reporting: An Exploratory Study based on Sri Lankan Listed Firms	R.N.K. Soysa* A. Pallegedara* A.S. Kumara	
03.00 – 03.15 pm	67	Perceived Barriers of Employee Transition to Entrepreneurship: A Scale Development	W.D.N.S.M. Tennakoon* A.K.D.N. Dilshani W.M.N.M. Wijethunga P.A.B.H. Amarathunga S.M.N. Praveeni W.J.A.J.M. Lasanthika	
03.15 – 03.30 pm	80	An Investigation of the Relationship Between Undergraduates' Participation in Sports and Their Academic Performance	RJ Wellassa*	
03.30 – 03.45 pm	86	The Impact of Role Conflict and Role Ambiguity on Job Performance through Self Efficacy: A Study on the Interns of State Universities in Sri Lanka during the Covid-19 Pandemic	H.P.N.I. Kumarasinghe M.M.D.R. Deegahawature*	
03.45 – 04.00 pm	87	Feedback Gamification and Generation Z IT Professionals' Job Satisfaction in Post-COV- ID-19 Environment	H.D. Jayathilake* S.K.Gamage W.S. Sanjeewa	
04.00 – 04.15 pm	95	Impacts of Foreign Equity Markets on the Sri Lankan Equity Market: A Time Series Analysis	I.D.W. Samarawickrama* A. Pallegedara	



Session E : Medicine				
Session Chairs: Prof. KPJ Perera Prof. WDSJ Wickramasinghe		Coordinator: Dr. MHT Kumarasiri 076 753 0285	Time: 02.00 pm - 04.00 pm	
Time	Paper ID	Title of the Paper	Author/s	
02.00 – 02.15 pm	25	Resilience Level among Grade 10 Adoles-cents in the Gampaha District	<u>D. M. S. Manori*</u> P.L. Jayawardana P. Godamunne	
02.15 – 02.30 pm	35	Preferences and Determinantal Effects of using Electronic and Printed Learn- ing Materials among Medical Students in Wayamba University of Sri Lanka	E.A.A.M. Wickramarathna* A. Wijayasekara*	
02.30 – 02.45 pm	37	Voluntary E-Learning Engagement among Medical Undergraduates in Wayamba University of Sri Lanka	E.A.A.M. Wickramarathna* A. Wijayasekara* K.M. Chandimal*	
02.45 – 03.00 pm	43	Patterns of Hump-nosed Viper (<i>Hypnale hypnale</i>) Bites in Anuradhapura; A Descriptive Study	A. Wijayasekara* A. Silva*	
03.00 – 03.15 pm	53	Morphometric Analysis of Dry Mandibles of Sri Lankans for Sex Determination	E.A.A.M. Wickramarathna* P.D. Wimalasinghe* D. Ranasinghe* K.M. Chandimal*	
03.15 – 03.30 pm	82	A Descriptive Cross-Sectional Study to Assess the Changes in Urine Output, Urine Osmolality and Proteinuria in Critical Phase of Dengue; Interim Analysis	P.M. Nanayakkara* R.A.N. Ranathunga P.G.C.S. Bowatte M.M. Muthuthamby S. Jeevathayaparan	
03.30 – 03.45 pm	84	The Effectiveness of Online Learning Over In-Person Learning of Medical Under- graduates in Wayamba University of Sri Lanka	H.M.T.D. Herath* M.M.Y.N.B. Mapa C.W. Karunarathne	
03.45 – 04.00 pm	85	Evaluation of the Relationship Between Attendance and Academic Performance of Medical Undergraduates in Wayamba University of Sri Lanka	J.M.D.C. Jayasinghe* R.A.N. Ranathunga H.A.S.S. Hettiarachchi	



Session F : Technology				
Session Chairs: Prof. SU Adikary Dr. ALAK Ranaweera		Coordinator: Mr. HMSM Herath 077 389 5542	Time: 02.00 pm - 04.00 pm	
Time	Paper ID	Title of the Paper	Author/s	
02.00 – 02.15 pm	4	Effect on the Use of Natural Esters on the Area of the Creeping Discharge Propagation	S. Ediriweera* P. Jayarathna R. Samarasinghe R. Lucas	
02.15 – 02.30 pm	9	Suppression of Noise in Image Differencing by a Post Filtering Technique	M.R.H.E. Bandara* W.A.S. Wijesinghe I.P.M. Wickramasinghe	
02.30 – 02.45 pm	11	Application of an Improved GIS based MCA Approach for the Integration of Flood Losses in Flood Risk Analysis	D. R. Dassanayake* H. Oumeraci	
02.45 – 03.00 pm	14	Environmental Factors Influencing Labour Productivity in Sri Lankan Building Construc-tion Projects	M. Kesavan* P.B.G. Dissanayake C.K. Pathirana M.M.D.R Deegahawature K.D.R. Silva	
03.00 – 03.15 pm	50	Development of Portable Rubber Tree (Hevea brasiliensis) Girth Measuring Instrument using Infrared Proximity Sensors	U.S. Liyanaarachchi*	
03.15 – 03.30 pm	77	Millimetre Level Accurate Landing of Drone Using Active and Passive Position Correction	U.W.A.C.C. Ubesingha* V.G.T.N. Vidanagama* I.P.M. Wicramasinghe*	
03.30 – 03.45 pm	91	Approach for Synthesis of Molybdenum Disulphide using Solution Reaction and Heat Degradation Method	L.H.M.B.P.S. Lansakara R.D.A.A. Rajapaksha C.A.N. Fernando*	
03.45 – 04.00 pm	94	Anomaly Detection of SVM under Poisoning Attack	W.D. Samanwickrama* I.J. Amadoru L.D.R.D Perera	



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