



**INTERNATIONAL CONFERENCE ON APPLIED AND PURE SCIENCES**  
**ICAPS 2023 – Kelaniya**  
**Faculty of Science, University of Kelaniya, Sri Lanka**  
**13<sup>th</sup> October 2023**



**Session: MO-01-1**  
**Track: Multidisciplinary Research**  
**Venue: A11-207**

**Session Chair 1:** Dr. U.P. Liyanage (University of Kelaniya)

**Moderator:** Mr. A.A.K. Perera

**Session Chair 2:** Dr. (Ms.) C.R. Munasinghe (University of Sri Jayewardenepura)

**Shadow Moderator:** Ms. R.M.P.M. Rathnayake

Abstract ID	Submission ID	Session ID	Paper Title	Authors	Time
MO-01	02	MO 01-1-01	Investigating the effect of climate factors on dengue incidence in Kandy, Sri Lanka	<u>H.A.N. Madhumali</u> and N. Varathan	11.00 – 11.15
MO-09	40	MO 01-1-02	Prevalence intervention of physical activity among university students: A cross-sectional study	<u>K. Karthiyejan</u>	11.15 – 11.30
MO-10	42	MO 01-1-03	Evaluation of the risk model for Covid-19 Using Geographical Information Systems	<u>H.P.U. Fonseka</u> , B.S. Marasinghe and A.R. Mohamed Rila	11.30 – 11.45
MO-14	49	MO 01-1-04	Reexamining the causal relationship between government expenditure and national income in four South Asian countries	<u>W.A.H. Kavindra</u> and B.S. Habaragoda	11.45 – 12.00
MO-16	57	MO 01-1-05	Undergraduates' perception on Collaborative learning; A case study based on Faculty of Health-Care Sciences, Eastern university, Sri Lanka	<u>N. Janane</u> and M.A.F. Sihnas	12.00 – 12.15
MO-21	78	MO 01-1-06	An automated machine learning approach to detect Leishmania parasites: An alternative tool for Leishmaniasis disease diagnosis	<u>J.A.Y.S. Amarathunge</u> , N. Gunathilaka, H. Sudusinghe and T.H.W.T. Nilaweera	12.15 – 12.30
MO-23	89	MO 01-1-07	Implementing an Automated Personal Name Authority File for Enhanced Information Retrieval in Sri Lankan Library Online Public Access Catalogues	<u>P.L. Wanigasooriya</u> and R.W.P. De Silva	12.30 – 12.45
MO-24	93	MO 01-1-08	A study of the correlation between local meteorology and atmospheric particulate matter in Kandy and Battaramulla in Sri Lanka	<u>P.M. Batuwita</u> , R.A.W. Ranawaka Arachchi, P.U. Santhiyago, J.J.M.A.D. Jayasundara and G. Naveendrakumar	12.45 – 13.00



**RESEARCH COUNCIL**  
**UNIVERSITY OF KELANIYA**



**INTERNATIONAL CONFERENCE ON APPLIED AND PURE SCIENCES**  
**ICAPS 2023 – Kelaniya**  
**Faculty of Science, University of Kelaniya, Sri Lanka**  
**13<sup>th</sup> October 2023**



**Session: MO-01-2**  
**Track: Multidisciplinary Research**  
**Venue: A11-301**

**Session Chair 1:** Prof. M.A.Y.L. Nadeesha (University of Kelaniya)

**Moderator:** Ms. U.W.N.H. Gunawardhana

**Session Chair 2:** Dr. R.C.L. De Silva (University of Kelaniya)

**Shadow Moderator:** Ms. U.K.K. Jayarathne

Abstract ID	Submission ID	Session ID	Paper Title	Authors	Time
MO-03	12	MO 01-2-01	Pyrolysis of Plastic Waste into Liquid Fuel	<u>P.G.I. Uthpalani</u> , D.S.M. De Silva, V.P.A. Weerasinghe and J.K. Premachandra	11.00 – 11.15
MO-15	56	MO 01-2-02	Visible light sensitized antibacterial paint using copper doped TiO <sub>2</sub> nanoparticles	<u>R.A.A.C. Rajapaksha</u> , E.N. Jayaweera, H.C.S. Perera and B.S. Nanayakkara	11.15 – 11.30
MO-19	64	MO 01-2-03	Avocado seed and skin - based dyes for treatment of linen fabrics	<u>E.H.K. Ranawaka</u> , K.G.R. Samarawickrama, M.H. Medagedara and C.N. Herath	11.30 – 11.45
MO-20	77	MO 01-2-04	Development of robust superhydrophobic plastic sheets using diatomaceous earth	<u>D.H.T.S. Jayaweera</u> , M. Maddumaarachchi and S.M. Egodage	11.45 – 12.00
MO-34	164	MO 01-2-05	Study on the effect of banana peel fiber (BPF) as reinforcement in ABS/BPF composites	<u>T.D.S. Gunasekera</u> and S.A.S.C. Samarasinghe	12.00 – 12.15
MO-37	172	MO 01-2-06	Development of herbal tea using pomegranate ( <i>Punica granatum</i> ) peel powder from Sri Lankan cultivars	<u>M.D.J. Mirando</u> and M.K.B. Weerasooriya	12.15 – 12.30
MO-41	198	MO 01-2-07	Study of Synergistic Bioactivities of Leaves of <i>Coffea arabica</i> with Copper Oxide Nanoparticles	<u>N.S. Weligamage</u> and K.C. Weerasiri	12.30 – 12.45



**RESEARCH COUNCIL**  
**UNIVERSITY OF KELANIYA**



**INTERNATIONAL CONFERENCE ON APPLIED AND PURE SCIENCES**  
**ICAPS 2023 – Kelaniya**  
**Faculty of Science, University of Kelaniya, Sri Lanka**  
**13<sup>th</sup> October 2023**



**Session: MO-01-3**  
**Track: Multidisciplinary Research**  
**Venue: A11-307**

**Session Chair 1:** Prof. (Ms.) M.D.M.D.W.M.M.K. Yatawara (University of Kelaniya)

**Moderator:** Ms. H.S. Wijeratne

**Session Chair 2:** Dr. M.P. Deeyamulla (University of Kelaniya)

**Shadow Moderator:** Ms. T.P.G.N.T. Alvis

Abstract ID	Submission ID	Session ID	Paper Title	Authors	Time
MO-04	18	MO 01-3-01	Development and validation of an analytical method to detect Monosodium Glutamate in food samples and analysis of MSG in selected Sri Lankan food products	D.D. Sithumini, D.R. Pandithavidana and T.M.D.D. Thambavita	11.00 – 11.15
MO-06	30	MO 01-3-02	Microplastic contamination in shrimps from the Negombo Lagoon - Sri Lanka	P.L.M.J.H. Lawan, D.S.M. De Silva, A.A.D. Amarathunga, A. McGoran, A. Bakir and D.B. Sivyer	11.15 – 11.30
MO-11	43	MO 01-3-03	<i>In silico</i> ADMET analysis of compounds identified in the genus <i>Impatiens</i> in oral administration	W.P.B.R.T. Jayaweera, A.M.S.C. Sooriyawansa, W.M.T.D.N. Weerakoon and A.M.D.M.B. Abeykoon	11.30 – 11.45
MO-13	48	MO 01-3-04	Chemical and microbiological investigation on radiolytic degradation of antibiotic Amoxicillin in water	B.G.H. Madhushani, M.R. Lamabadusuriya, C.D.R. Pathirana, A.K. Ratnayake, K.R.C. De Silva and R D.R. Ranasinghe	11.45 – 12.00
MO-26	101	MO 01-3-05	Impact of Wastewater Treatment Plant on the Quality of Water in the Canals Passing Through Kurunegala City	S.A.P.T. Samaraweera and M.M.M. Najim	12.00 – 12.15
MO-31	130	MO 01-3-06	Quantification and health risk assessment of cadmium and lead content in skin creams sold in the Sri Lankan market	E.M.N.S. Senarathne and E.M.R.K.B. Edirisinghe	12.15 – 12.30
MO-32	158	MO 01-3-07	Growth patterns of <i>Aspergillus sp.</i> in stored rice during the post-harvest storage and their in-vivo growth control by cinnamon oil-chitosan microcapsules	R.P.S.P. Rajapaksha, P.G.J.D. Kumarathunga and P.A.S.R. Wickramarachchi	12.30 – 12.45
MO-36	171	MO 01-3-08	Factors affecting to degenerate clinical samples received for Clinical Biochemistry laboratory at the Medical Research Institute, Sri Lanka	M.N.F. Zam Hareera, M. Vivitharani, H.M.R.S. Herath, K.A.K.P. Perera and W.S.T. Wijesundara	12.45 – 13.00



**RESEARCH COUNCIL**  
**UNIVERSITY OF KELANIYA**



**INTERNATIONAL CONFERENCE ON APPLIED AND PURE SCIENCES**  
**ICAPS 2023 – Kelaniya**  
**Faculty of Science, University of Kelaniya, Sri Lanka**  
**13<sup>th</sup> October 2023**



**Session: MO-02-1**  
**Track: Multidisciplinary Research**  
**Venue: A11-207**

**Session Chair 1:** Prof. (Ms.) W.J.M. Samaranayake (University of Kelaniya)

**Moderator:** Ms. W.M.G.H.P. Wickramasinghe

**Session Chair 2:** Dr. (Ms.) F.S.B. Kafi (University of Kelaniya)

**Shadow Moderator:** Ms. K.D.P.V. Sudeshini

Abstract ID	Submission ID	Session ID	Paper Title	Authors	Time
MO-07	31	MO 02-1-01	The occurrence of extreme hydrological events in Colombo district and their impacts	<u>B.N. Rathnayake</u> , A.D.A.P. Premarathna, H.G.T.D. Hewawasam, T. Magisa, and B.G.N. Sewwandi	14.00 – 14.15
MO-08	37	MO 02-1-02	Visible light photocatalytic activity of c-doped Fe <sub>2</sub> TiO <sub>5</sub> nanoparticles synthesised by acid leaching of ilmenite	C. Thambiliyagodage and <u>M.R. Liyanage</u>	14.15 – 14.30
MO-18	60	MO 02-1-03	Deep learning driven mobile robot to detect and classify tomato leaf diseases	<u>G.M.S.C. Gajendrasinghe</u> , K.M.S.D. Abeysiri, I.M. Rathnayake and H.Y.R. Atapattu	14.30 – 14.45
MO-22	87	MO 02-1-04	Selecting suitable locations to establish a ground solar farm in Trincomalee District in Sri Lanka using GIS	<u>T.S.M. Senadeera</u> , W.M.J.Y. Bandara, H.M.A. Herath and J.M.M.S. Ariyawansa	14.45 – 15.00
MO-27	102	MO 02-1-05	GIS based multicriteria analysis for flood hazard assessment: A case study from Walawe River basin, Sri Lanka	C.V. Gallage, <u>A.A.S.G. Wijesundera</u> , K.C. Kodithuwakku, W.S.B. Wickramasingha and V.P.A. Weerasinghe	15.00 – 15.15
MO-28	108	MO 02-1-06	Spatial distribution of soil and water quality in Eldeniya - East grama niladhari division	<u>P.E.P.S. Deraniyagala</u> , H.M.D.S.D. Heenkenda and R.C.L. de Silva	15.15 – 15.30
MO-30	127	MO 02-1-07	Mosquito detection and repellent system using acoustics signals for household use	<u>S.V. Senanayake</u> , C.B. Warnakulasooriya, A.L.A.K. Ranaweera and K.M.D.C. Jayathilaka	15.30 – 15.45
MO-33	160	MO 02-1-08	Unlocking the potential of convolutional neural networks for precise classification of finger pulse waves in diabetic patients and healthy individuals	<u>P.A.D.H. J. Gunathilaka</u> , B.M.T. Kumarika, K.M.D.C. Jayathilaka, D. Perera, J.A. Liyanage and S.R.D. Kalingamudali	15.45 – 16.00





**INTERNATIONAL CONFERENCE ON APPLIED AND PURE SCIENCES**  
**ICAPS 2023 – Kelaniya**  
**Faculty of Science, University of Kelaniya, Sri Lanka**  
**13<sup>th</sup> October 2023**



**Session: MO-02-2**  
**Track: Multidisciplinary Research**  
**Venue: A11-301**

**Session Chair 1:** Dr. (Ms.) H.M. Herath (University of Kelaniya)

**Moderator:** Ms. M.G.M.T. Karunathilaka

**Session Chair 2:** Dr. (Ms.) R.P. Wanigatunge (University of Kelaniya)

**Shadow Moderator:** Ms. R.A.I. Madumali

Abstract ID	Submission ID	Session ID	Paper Title	Authors	Time
MO-02	4	MO 02-2-01	<i>In vivo</i> and <i>in silico</i> analysis of inhibition of rice ( <i>Oryza sativa</i> ) bran lipase with guava leaf ( <i>Psidium guineense swartz</i> ) extract	A.M.S.C. Sooriyawansa, R. Munaweera, N. Jayathilaka and K.N. Seneviratne	14.00 – 14.15
MO-05	29	MO 02-2-02	<i>In vitro</i> evaluation of antibacterial activity mediated by palmyra pulp and sprout silver-zinc oxide nanocomposites	A.M.S. Aththanayake, G. Thiripuranathar and S. Ekanayake	14.15 – 14.30
MO-12	45	MO 02-2-03	Antimicrobial and Antifungal Activities of Silver Nanoparticles Biosynthesized by <i>Pothos scandens</i> and <i>Kaempferia galanga</i> Aqueous Extracts	K.G.A. Samadhi, P. Kalansuriya, W.M.D.G.B. Wijerathna and K.G.P. Wasana	14.30 – 14.45
MO-35	169	MO 02-2-04	Evaluation of phytochemical profile and <i>in -vitro</i> antioxidant activity <i>Suaeda maritima</i>	K.P.S.S. Pathirana, H.M.N.P. Herath, D. Perera, R.N. Attanayake and P.A. Paranagama	14.45 – 15.00
MO-40	197	MO 02-2-05	Investigation of Antioxidant and Anti-diabetic Activities of <i>Antidesma alexiteria</i>	A.M.H.R.S. Karunarathne and K.C. Weerasiri	15.00 – 15.15
MO-42	199	MO 02-2-06	Investigation of Antioxidant and Antityrosinase activity of <i>Bauhinia kockiana</i> and <i>Cocos nucifera var. aurantiaca</i>	H.M. Batagoda and K.C. Weerasiri	15.15 – 15.30
MO-44	211	MO 02-2-07	Evaluation of Anti-tyrosinase Activity and Antioxidant Activity in the Leaf Extract of <i>Senna auriculata</i> (L.) Roxb. and the Flower Petal Extract of <i>Couroupita guianensis</i> Aubl.	M.N. Senadeera and D.N. Udukala	15.30 – 15.45
MO-45	212	MO 02-2-08	Determination of Antioxidant Activity of the Aqueous Extract of Corm of <i>Musa paradisiaca</i> L.	Y.M.G.A.I. Yatawatta and D.N. Udukala	15.45 – 16.00



**RESEARCH COUNCIL**  
**UNIVERSITY OF KELANIYA**



**INTERNATIONAL CONFERENCE ON APPLIED AND PURE SCIENCES**  
**ICAPS 2023 – Kelaniya**  
**Faculty of Science, University of Kelaniya, Sri Lanka**  
**13<sup>th</sup> October 2023**



**Session: MO-02-3**  
**Track: Multidisciplinary Research**  
**Venue: A11-307**

**Session Chair 1:** Dr. (Ms.) R.P.G.K. Rajapaksa (University of Kelaniya)

**Moderator:** Ms. K.L.C.N.S. Perera

**Session Chair 2:** Dr. (Ms.) J.N. Dahanayake (University of Kelaniya)

**Shadow Moderator:** Ms. P.C.M. Nonis

Abstract ID	Submission ID	Session ID	Paper Title	Authors	Time
MO-17	58	MO 02-3-01	An attempt to establish a cutoff value for peripheral blood hematopoietic progenitor cell count to predict the viable CD34 count in multiple myeloma patients undergoing autologous peripheral blood stem cell transplantation	<u>T.D. Hewapathirana</u> , T.C. Perera, R. Tudugala, S. Suresh and D.U. Kottahachchi	14.00 – 14.15
MO-25	100	MO 02-3-02	Investigation of gelatin and sodium alginate as gelling agents for emulsion gel polymerization of styrene under reduced temperature	<u>M.P.J. Fernando</u> and M. Maddumaarachchi	14.15 – 14.30
MO-29	117	MO 02-3-03	Development of energy briquettes using <i>Schleichera oleosa</i> (Ceylon oak) wood, <i>Oryza sativa</i> (rice husk, rice straws and rice brain) and <i>Saccharum officinarum</i> (bagasse)	<u>K.D.A. Dulanjana</u> , M.M. Udawatta, P.D.A. Prasad, T.P. Bodaragama and D S.M. De Silva	14.30 – 14.45
MO-38	177	MO 02-3-04	Utilization of Cinnamon ( <i>Cinnamomum verum</i> ) and Turmeric ( <i>Curcuma longa</i> ) to develop novel low glycemic index bread products	<u>U.S. Wijewardhana</u> , M.A. Jayasinghe, I. Wijesekara and K.K.D.S. Ranaweera	14.45 – 15.00
MO-39	186	MO 02-3-05	Determination of color characteristics, fatty acid composition and heavy metal in purified shark liver oil	<u>J.A.K.S. Jayakody</u> , E.M.R.K.B. Edirisinghe, S.A. Senevirathne and L. Senarathna	15.00 – 15.15
MO-43	204	MO 02-3-06	Green synthesis of ZnO/CuO nanocomposite using juice extracts of <i>Citrus limon</i> and the evaluation of its antibacterial activity	<u>W.H.P.A.D. Perera</u> and K.C. Weerasiri	15.15 – 15.30
MO-46	234	MO 02-3-07	Formulation and evaluation of the anti-inflammatory activity of an herbal cream utilizing <i>Curcuma longa</i> L. (Turmeric) and <i>Elaeocarpus serratus</i> L. (Ceylon olive)	<u>K. Wimalasooriya</u> , and M.J. Gunaratna	15.30 – 15.45
MO-47	235	MO 02-3-08	Evaluation of <i>Helicobacter pylori</i> urease inhibitory activity of (E)-1-(4-methoxybenzylidene)-2-phenylhydrazine	<u>D.M.P.M. Dissanayaka</u> and M.J. Gunaratna	15.45 – 16.00

