



Technical Session Schedule

**11th International Symposium on Advances in Civil and Environmental Engineering
Practices for Sustainable Development
(ACEPS – 2026)**

Technical Session Schedule

Time	Technical Session		
8.30-10.00	Inaugural Ceremony and Keynote Address 1		
10.00-10.30	Refreshments at the Cafeteria		
10.30-12.00	Technical Session 01		
	Session A1 Geotechnical Engineering and Infrastructure Development <i>MNLR 01</i>	Session A2 Sustainable Construction Practices <i>MNLR 02</i>	Session A3 Environmental Engineering <i>MNLR 03</i>
12.00-13.30	Lunch at the Cafeteria		
13.30-14.00	Keynote Address 2		
14.00-15.30	Technical Session 02		
	Session B1 Engineering Hydrology and Environmental Engineering <i>MNLR 01</i>	Session B2 Structural Engineering and Materials <i>MNLR 02</i>	Session B3 - Online Exclusively for Overseas Presenters <i>MNLR 03</i>
15.30-16.00	Refreshments at the Cafeteria		
16.00-17.30	Technical Session 03		
	Session C1 Structural Engineering <i>MNLR 01</i>	Session C2 Structural Health Monitoring Techniques <i>MNLR 02</i>	Special Session <i>Advancing Sustainable Water Applications in Sri Lanka</i> <i>MNLR 03</i>
18.30 Onwards	Awarding Ceremony and Symposium Dinner		

Technical Session 1

Technical Session - A1 - (10.30-12.00hrs)		
Venue - MNLR 01		
Title of the session - <i>Geotechnical Engineering and Infrastructure Development</i>		
Time	Paper Title and Author Details	Page
10.30 -10.45	ACEPS2026- GEO02 Effect of Fine Content on the Performance of Dynamic Compaction <i>H.C.R. Wijerathne and N.H. Priyankara</i>	35
10.45 - 11.00	ACEPS2026- TRAN01 Microsimulation-Based Adaptive Traffic Signal Control for Congestion Management at Urban Intersections: A Case Study of Julgaha Junction, Galle <i>D.M.G.K.P. Dasanayake, F. Maxwel, K.S. Wijesinghe, W.M.K.R.T.W. Bandara, and T.M. Rengarasu</i>	54
11.00 -11.15	ACEPS2026- STRU10 Wind Barrier Effects on Pedestrian-Level Wind Conditions Around Lift-Up Buildings: A CFD Approach <i>D.N. Liyanage, H.M.D.L. Premadasa, J.A.S.C. Jayasinghe, and A.J. Dammika</i>	15
11.15 - 11.30	ACEPS2026- GEO03 Experimental Investigation of Buried Pipe Behaviour in Geopolymer Soil-Binder Column-Improved Peaty Clay <i>W.V.C.J. Munasinghe and N.H. Priyankara</i>	36
11.30 - 11.45	ACEPS2026- STRU03 Performance & Feasibility of Self-Healing Concrete in Enhancing Durability of Hydropower Dam Structures <i>S. S. Hiripitiya, S.H.B. Wijekoon, and D.N. Subramaniam</i>	08
11.45 - 12.00	ACEPS2024- GEO04 Development of Bottom Ash and Sugarcane Bagasse Ash-based Geopolymer for the Stabilization of Soft Peaty Clay <i>R.M.D.P.P. Rathnayaka and N.H. Priyankara</i>	37

Technical Session 1

Technical Session - A2 - (10.30-12.00hrs) Venue - MNLR 02 Title of the session - <i>Sustainable Construction Practices</i>		
Time	Paper Title and Author Details	Page
10.30 - 10.45	ACEPS2026-MAT01 Enhance the Performance of Pervious Concrete by Partially Adding Fly Ash and Varying Aggregate Sizes <i>G.A. Xavier, S.H.B. Wijekoon, and D.N. Subramaniam</i>	44
10.45 - 11.00	ACEPS2026-MAT02 Synergistic Use of Limestone and Eggshell Powders for Sustainable Cement Block Production <i>M. Nithurshan, A. Vithushan, A. Shathursanan, and S. Kuvinthan</i>	45
11.00 -11.15	ACEPS2026-MAT05 Engineering Properties of Cement Sand Masonry Blocks Incorporating Rice Husk Ash and Limestone Crusher Plant Dust as Partial Replacements for Sand <i>C. Piruthevi and D. de S. Udakara</i>	47
11.15 - 11.30	ACEPS2026-MAT06 Ferrock: A Promising Carbon-Negative Material for Sustainable Construction <i>D.H.A. Maduranga, J.M.R.S. Appuhamy, W.M.K.R.T.W. Bandara, C.E. Kankanamge, and P. Chun</i>	48
11.30 -11.45	ACEPS2026-MAT07 Comparative Assessment of Parallel-to-Grain Shear Properties of Two Sri Lankan Bamboo Species: Dendrocalamus Hookeri and Dendrocalamus Giganteus <i>K.H.J. Yasantha, K.A.V.S.W. Gunarathna, M.N. Thathsarani, R.M.C.M. Rajapakse, W.A.D.M. Jayathilaka, P.L.N. Fernando, and H.M.S.T. Herath</i>	49
11.45 - 12.00	ACEPS2026-MAT10 Sustainable Concrete Production - Quartz-Biotite Gneiss and Quarry Dust as Alternative Aggregates <i>P.D. Dharmaratne and M.D.D. Pramuditha</i>	52

Technical Session 1

Technical Session - A3 - (10.30-12.00hrs) Venue - MNLR 03 Title of the session - <i>Environmental Engineering</i>		
Time	Paper Title and Author Details	Page
10.30 - 10.45	ACEPS2026-ENV01 Performance of Rice Husk Bio Char Amended Sand Filters for Agricultural Runoff Treatment <i>N. Sinthuja, R. Kethuja, S. Tharshika, and R. Luxmikanth</i>	27
10.45 - 11.00	ACEPS2026-ENV02 Assessment of Groundwater Quality for Drinking Purposes Using the Water Quality Index in Kalmunai Municipality, Sri Lanka <i>P.R.D.S. Ranasinghe, A.C.A. Suja, and R.D.P. Madhushika</i>	28
11.00 -11.15	ACEPS2026-ENV03 Influence of Land Use and Saltwater Intrusion on Microbial Community Structure and Antibiotic Resistance Genes in Urban Rivers of Galle, Sri Lanka <i>I.A.C.S. Senavirathna, Mohomed N. M. Shayan, Wasala M.K.R.T.W. Bandara, G.G. Tushara Chaminda, and Hisashi Satoh</i>	29
11.15 -11.30	ACEPS2026-ENV04 Dynamics of Microplastics and Antibiotic-Resistant Gene (ARG) in Urban Waters and Wastewater Treatment Plants <i>M.J.M. Althaf, L.M.V.S.K. De mel, M.N.M. Shayan, W.M.K.R.T.M. Bandara, G.G.N. Thushari, Hisashi Satoh, and G.G.T. Chaminda</i>	30
11.30 - 11.45	ACEPS2026-ENV06 Evaluation of Plant-derived Coagulants for Sustainable Water Treatment <i>J.A.D.N. Perera, N.S. Miguntanna, N.P. Miguntanna, and U. Rathnayake</i>	31
11.45 - 12.00	ACEPS2026-ENV07 Simulation of Dissolved Organic Matter Transport in Permeable Reactive Barriers (PRBs) Treating Landfill-Impacted Groundwater <i>J.P.T.H. Prabodha, W.K.C.N. Dayanthi, and N.S. Miguntanna</i>	32

Technical Session 2

Technical Session - B1 - (14.00-15.30hrs)		
Venue - MNLR 01		
Title of the session - <i>Engineering Hydrology and Environmental Engineering</i>		
Time	Paper Title and Author Details	Page
14.00 - 14.15	ACEPS2026- HYDR01 Implication of Deflectors on Ecohydraulics with Special Emphasis on Habitats for Fish <i>W. M. P. R. Weerakoon, P. I. A. Gomes, M. P. Kodikara, and A. M. A. D. Attanayake</i>	40
14.15 - 14.30	ACEPS2026- HYDR02 Analysis of River Meandering Using Remote Sensing: A Case Study of the Gal Oya River <i>A.C.A. Suja and M.N.M. Habli</i>	41
14.30 - 14.45	ACEPS2026- HYDR03 Impact of Streamwise Velocity in Different Vegetation Configurations in Different Bed Slopes in Open Channels under Uniform Conditions <i>M.R. Prashan, N.S. Miguntanna, and N.P. Miguntanna</i>	42
14.45 - 15.00	ACEPS2026- HYDR04 Assessing Rainfall-runoff Simulation Capability across Hydrological Regimes in Nilwala Catchment, Sri Lanka: MIKE 11 NAM Modelling Approach <i>T.N. Wickramarachchi</i>	43
15.00 - 15.15	ACEPS2026-ENV08 High-Throughput Approach to Enumerating E. coli in River Water and Waste Water by Measuring Enzyme Activities via Microplate Reader <i>W.P.D. Chamika, K.M.P.N. Chandrasekara, M.N.M. Shayan, G.G.T. Chaminda, W.M.K.R.T.M. Bandara, and Hisashi Satoh</i>	33
15.15 - 15.30	ACEPS2026-ENV09 Evaluation of Bacterial and Viral Indicator Behaviour in Soil around On-site Sanitation Systems in Southern Sri Lanka <i>U.D.H. Fernando, R.M.D.H. Bandara, G.G.T. Chaminda, M. Otaki, and Y. Otaki</i>	34

Technical Session 2

Technical Session - B2 - (14.00-15.30hrs) Venue - MNLR 02 Title of the session - <i>Structural Engineering and Materials</i>		
Time	Paper Title and Author Details	Page
14.00 - 14.15	ACEPS2026-MAT04 Geometric Shape Descriptors for Aggregate Classification <i>K. Rishikeshan, D.N. Subramaniam, and M. Sajeevan</i>	46
14.15 - 14.30	ACEPS2026-MAT08 Accelerated Curing of Concrete with Shredded Rubber <i>S.Nandaggopan and Dr.B.Janarthanan</i>	50
14.30 - 14.45	ACEPS2026-MAT09 Camera Configurations for Vision-Based Monitoring of Construction and Demolition Waste in Conveyor Systems: A Technical Review <i>U.G.U.P. Samarasekara, S.A.R.R Suraweeraarachchi, H.M.P.B. Ariyaratne, J.A.S.C. Jayasinghe, U. Jayasinghe, and C.S. Bandara</i>	51
14.45 - 15.00	ACEPS2026-STRU01 Combined Effects of Corrosion-induced Prestress Loss and Expansion on the Structural Performance of Prestressed Concrete Beams <i>A.J.M.S.D. Premasiri and S. Bandara</i>	06
15.00 - 15.15	ACEPS2026-STRU02 Comparison of Analytical Models for Predicting the Behaviour of Dapped-end Connections <i>Navod Kumarasinghe, Sumudu Herath, and Chathura Rajapakse</i>	07
15.15 - 15.30	ACEPS2026-STRU04 Effect of Corrosion-Induced Concrete Spalling on the Load Capacity of Reinforced Concrete Members <i>S. Ragupriyan, H.V.A.N. Sanjeeva, and J.M.R.S. Appuhamy</i>	09

Technical Session 2

Technical Session - B3 - (14.00-15.45hrs) Venue - MNLR 03 Title of the session - Online Session - (Exclusively for Overseas Presenters)		
Time	Paper Title and Author Details	Page
14.00 - 14.15	ACEPS2026-GEO05 Data-driven Discovery of Quasi-saturated Pore Pressure Governing Equations Using Multi-trajectory SINDy <i>Zafar Avzalshoev and Pang-jo Chun</i>	38
14.15 -14.30	ACEPS2026-GEO06 Field Recording of Slope Failures Associated with Cyclone Ditwah in Kandy, Sri Lanka, Using a 360-Degree Image-Based Information Management System <i>S. Kubo, T. Yamane, N. Katayama, Y. Chen, and P.J. Chun</i>	39
14.30 - 14.45	ACEPS2026-STRU13 A Severity-Weighted Damage Cluster Indicator for Maintenance Prioritization of Steel Girder Bridges <i>Shreejan Maharjan and Pang-jo Chun</i>	18
14.45 - 15.00	ACEPS2026-STRU14 Construction of a 360-Degree Image Database for Recording Cyclone Ditwah-Induced Damage to a Railway Bridge in Sri Lanka <i>Tatsuro Yamane, Shiori Kubo, Naomichi Katayama, Yu Chen, and Pang-jo Chun</i>	19
15.00 - 15.15	ACEPS2026-STRU16 Structural Performance and AI-Based Strength Modeling of Aqua-Thermally Treated Rubberized Concrete (ATT-RuC) Reinforced with Recycled Tire Steel Fibers (RTSF): Applications for Railway Sleepers and Sustainable Infrastructures <i>J.M.R.S. Appuhamy, P. Chun, B.G.V. Sanjaya, S.M. De Silva, and S. Venkatesan</i>	21
15.15 -15.30	ACEPS2026-STRU17 Integrating Physical Quantities into Transformer-based Bridge Deterioration Prediction <i>Shogo Inadomi and Pang-jo Chun</i>	22
15.30 – 15.45	ACEPS2026-MAT11 Assessment of Recycled Glass as a Partial Replacement for Fine Aggregates in 3D-Printed Concrete <i>Kevindu Gamachchige, Lakdinu Hunkiri Arachchilage, Janitha Migunthanna, and Pathmanathan Rajeev</i>	53

Technical Session 3

Technical Session - C1 - (16.00-17.30hrs) Venue - MNLR 01 Title of the session - <i>Structural Engineering</i>		
Time	Paper Title and Author Details	Page
16.00 - 16.15	ACEPS2026-STRU06 Empirical Models for Eccentrically Compressed Steel Box Piers under Bidirectional Cyclic Loading <i>W.A. Weerasekara, A.W.L. Wijesooriya, J.A.S.C. Jayasinghe, and G. B. Dissanayake</i>	11
16.15 - 16.30	ACEPS2026- STRU09 Seismic Vulnerability of Corroded RC Structures: A Review on Spatial Variability and Risk Modelling <i>R. A. Dihan, M. P. G. K. Peiris, A. J. Dammika, J. A. S. C. Jayasinghe, and C. S. Bandara</i>	14
16.30 - 16.45	ACEPS2026- STRU11 Investigation of Thermal Response and Delay Patterns in Porous Concrete with Varying Compaction <i>J. Voshithan, D. N. Subramaniam, and M. Sajeevan</i>	16
16.45 - 17.00	ACEPS2026- STRU12 Reducing Prediction Complexity of Pervious Concrete Permeability Through Machine Learning: A Comparative Optimization Study <i>Asoharasa Janarth, Biplob Kumar Pramanik, Daniel Niruban Subramaniam, Navaratnarajah Sathiparan, David Law, Sudhira De Silva, Muhammed Bhuiyan, and Champika Ellawala</i>	17
17.00 - 17.15	ACEPS2026- STRU20 A Review of Deep Learning Based Crack and Spalling Quantification for Concrete Bridge Inspection Using UAV Imagery <i>W.P.P.M. Wickramasinghe, J.M.R.S. Appuhamy, Pang-jo Chun, H.V.A.N. Sanjeeva, and S.M. De Silva</i>	25
17.15 - 17.30	ACEPS2026- STRU21 Bridge Member Segmentation Using CVAT-Annotated Bridge Structural Inspection Images and SegFormer Deep Learning Model <i>Sushama De Silva, Pang-Jo Chun, and J.M.R.S. Appuhamy</i>	26

Technical Session 3

Technical Session - C2 - (16.00-17.30hrs)		
Venue - MNLR 02		
Title of the session - <i>Structural Health Monitoring Techniques</i>		
Time	Paper Title and Author Details	Page
16.00 - 16.15	ACEPS2026-STRU05 Deep Learning-Based Crack Segmentation and Width Quantification in Reinforced Concrete Structures: A Comparative Evaluation <i>H. M. P. B. Ariyaratne, U. G. U. P. Samarasekara, E. M. R. Ekanayake, J. A. S. C. Jayasinghe, U. Jayasinghe, and A. J. Dammika</i>	10
16.15 - 16.30	ACEPS2026- STRU07 Image-based Assessment of Chemical Degradation in Concrete Structures: A Comprehensive Review <i>E. M. R. Ekanayake, A. J. Dammika, J. A. S. C. Jayasinghe, U. Jayasinghe, Mojtaba Mahmoodian, and Sujeeva Setunge</i>	12
16.30 -16.45	ACEPS2026- STRU08 Effectiveness of Vibration-based Structural Health Monitoring for Multi-Story Concrete Buildings: Importance of Integrating Finite Element Modeling and Deep Learning Approaches <i>R. A. Dihan, D. M. P Methsara, G. D. P. S. Dewapriya, A. J. Dammika, and J. A. S. C. Jayasinghe</i>	13
16.45 - 17.00	ACEPS2026- STRU15 Automated GPR Subsurface Utility Detection: Performance and Cross-Domain Transferability <i>Gang Liu and Pang-jo Chun</i>	20
17.00 -17.15	ACEPS2026- STRU18 Vision-Based Bridge Damage Detection Using Deep Learning: A Comprehensive Review <i>B.N.K. Ekanayake, J.M.R.S. Appuhamy, Pang-jo Chun, N.M. Wagarachchi, and S.M. De Silva</i>	23
17.15 - 17.30	ACEPS2026- STRU19 Effect of Surface Crack Propagation on Residual Load Carrying Capacity of Reinforced Concrete Bridge Girders: A Comprehensive Review <i>S.M.K.G. Samarasinghe, J.M.R.S. Appuhamy, Pang-jo Chun, H.G.S. Mayuranga, and S.M. De Silva</i>	24