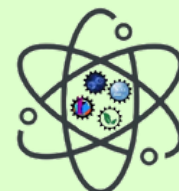




UMS
UNIVERSITI MALAYSIA SABAH

**FAKULTI
SAINS DAN SUMBER ALAM**
Faculty of Science and Natural Resources



SEMINAR ON SCIENCE AND TECHNOLOGY

17th SEMINAR ON SCIENCE AND TECHNOLOGY 2024

“Innovation and Resilience in a Changing World”



PROGRAMME BOOK & ABSTRACT

25th | SEPTEMBER | 2024 **ONLINE CONFERENCE**

Organised by:
Faculty of Science and Natural Resources, Universiti Malaysia Sabah



PROGRAM OVERVIEW

25 SEPTEMBER (WEDNESDAY)

GRAND VIRTUAL ROOM:



<https://cl.gy/fmaki>

TIME

EVENT

7.00 - 8.00 am

Registration

8.00 - 9.00 am

Opening Ceremony
(Grand Virtual Room)

KEYNOTE SPEAKER SESSION

Your paragraph text

9.00 - 9.30 am

Keynote Speaker I

Associate Prof. Ts. Dr. Sazmal Effendy Bin Arshad
Faculty of Science and Natural Resources
University Malaysia Sabah

Moderator :

Associate Prof. ChM. Ts. Dr. Mohd Sani Sarjadi

9.30 - 9.40 am

Q&A Session

9.40 - 10.10 am

Keynote Speaker II

Dato' Ts. Ir. Dr. Mohd Dali Isa
Chief Executive Officer / Accountable Manager
KKIP Aerospace Training Centre

Moderator :

Associate Prof. ChM. Ts. Dr. Mohd Sani Sarjadi

10.10 - 10.20 am

Q&A Session

10.20 - 10.30 am

Session Break

PROGRAM OVERVIEW

25 SEPTEMBER 2024

TIME

EVENT

PARALLEL SESSION

10.30 am - 12.45 pm

Room 1: Science & Technology (ST)

Room 2: Natural Resources (NR)

Room 3: Mathematics & Statistics (MATS)

Room 4: Material Science Applications (MSAP)

Room 5: Environmental Science Management (ESM)

LUNCH BREAK

2.00 - 4.00 pm

Room 1: Science & Technology (ST)

Room 2: Natural Resources (NR)

Room 6: Natural Disaster AND Sustainability Community (SC)

Room 7: Medical Science & Public Health (MSPH)

Room 8: Multidisciplinary

4.00 - 4.30 pm

Session Break

4.30 pm

Closing Ceremony



OPENING CEREMONY

25 SEPTEMBER 2024

8.00 am	Attendance of the Participants & VIPs
8.30 am	The National Anthem 'Negaraku' and 'Sabah Tanah Airku' Doa Recitation
8.40 am	Welcoming Address by Prof. Dr. Jualang Azlan Bin Gansau Dean, Faculty of Science and Natural Resources (FSSA), Universiti Malaysia Sabah
8.45 am	Opening Launch Address by Professor Datuk Dr. Kasim Hj. Mansor Vice Chancellor, Universiti Malaysia Sabah
8.50 am	Opening Ceremony Montage
8.55 am	Photo Session
9.00 am	End of the Opening Ceremony

CLOSING CEREMONY

25 SEPTEMBER 2024

4.30 pm	Closing Speech By : Assoc. Prof. Dr. Assis Kamu Chairperson, 17th Seminar on Science and Technology 2024
4.35 pm	Announcement of the Best Presenters
4.40 pm	Closing Montage
4.45 pm	Photo Session
5.00 pm	End of the Closing Ceremony

PROGRAM SCHEDULE

25 SEPTEMBER 2024

Parallel Session 1

Scope Time	Room 1: Science & Technology	Room 2: Natural Resources	Room 3: Mathematics & Statistics	Room 4: Material Science Applications	Room 5: Environmental Science Management
	Session Chair: Ts. Dr. Mohd Hafiz Abd Majid	Session Chair: Dr. Fera @ Nony Cleophas	Session Chair: Ts. Dr. Arif Bin Mandangan	Session Chair: Ts. Dr. Abu Bakar Abd Rahman	Session Chair: Assoc. Prof. Ts. Dr. Harry Chong Lye Hin
10.30 – 10.45 am	WAN SYAIDATUL AQMA (5ST) Exploration of Biosurfactant for Enhanced Polyethylene Terephthalate (PET) Plastic Biodegradation	TAN WEI HSIANG (77NR) Biochemical Content in Roselle var UMKL-1 Calyx Cultivated Under Different Soil Media	WILVALDO DOUSIP (21MATS) Type-2 Fuzzy Intuitionistic Bezier Curve for Modeling Uncertainty Data	AL-FADZRUL AZIM AL- FADHIR (23MSAP) Lift-Off Effect in Coercivity Measurement on Magnetic Materials: A Systematic Literature Review	RUNZE BAO (95ESM) Spatiotemporal Analysis of Forest Land Use and Landscape Patterns in Mountain Fanjing National Nature Reserve Based on Remote Sensing Images
10.45 – 11.00 am	MD SAFIUL ALAM BHUIYAN (18ST) Identification of Avian Corona Virus by Molecular and Serology in Sabah, Malaysia	SITI AISHAH MOHD ALI (26NR) Metabolites Fingerprinting of Roselle UKMR-2 Extracts Cultivated under Influences by Irrigation Treatment using NMR-based Metabolomics	NOWYANNIE TAMSIN (24MATS) Performance Comparison of Gauss-Seidel and Log-space Gauss- Seidel Algorithms for Path Planning in Sparse Indoor Environments	MOH PAK YAN (33MSAP) Surface Modification of MIL-88-NH2 for the Enhancement of Organic- Pollutant Removal in Water	SAHIBIN ABD RAHIM (29ESM) Heavy Metal Contamination In Lohan River, Ranau, Sabah, Malaysia
11.00 – 11.15 am	MOHD ARIFF ZULFADHLI BIN MOHD RAHIMIE (27ST) Antimicrobial and Anticancer Potential of Probiotic Lactic Acid Bacterium <i>Pediococcus acidilactici</i> TN1	SITI NORHAZIRAH RAHIM (31NR) Marshmallow Supplemented with Spinach (<i>Spinacia oleracea</i>) Powder: Effect of Spinach Percentage on Moisture, Fiber, Texture, Sensory and Color Characterization	ROZAIMI ZAKARIA (28MATS) Fuzzification Process of Fuzzy Z-Number Bezier Curve	SATURI BACO (49MSAP) Influence of Deposition Time on the Structure and Optical Properties of CuGaO2 Thin Films	MAZLINA MIZAN (91ESM) Water Quality and Heavy Metal Analysis at Tagal Moroli River of Kampung Luanti in Ranau, Sabah
11:15 – 11:30 am	AG SUFIYAN ABD HAMID (32ST) Fundamental Observation on Photovoltaic PV Panel Output Based on Various Ambient Temperature and Artificial Irradiance Exposure	MOHD SANI SARJADI (35NR) Mechanical Properties of Potassium Permanganate- Treated Bamboo Fibers Reinforced with Polyvinyl Alcohol Composites	SARIMAH SURIANSHAH (46MATS) Analysis of financial literacy in Sabah: Micro and SME	TEO SIOW HWA (52MSAP) A Perovskite Solar Cell Using Lanthanum-doped Nickel Oxide Hole Transporting Layer	MOHD AZAMUDDIN MOHD HASSAN (45ESM) Statistical Characterisation of Sediment in Seagrass Bed of Kg. Kebagu, Sabah, Malaysia
11:30 – 11.45 am	ISMAIL RAHIM (34ST) Evaluation of Unsupported Tenom Tunnel Based on Q-system	MOK SAM LUM (36NR) Metabolic Profiling of Upland and Lowland Rice Varieties in Sabah	KHADIZAH GHAZALI (48 MATS) Hybrid Block Newton with SOR Method for Large- Scale Unconstrained Minimization with Tridiagonal Hessian	RUBENA YUSOFF (64MSAP) Optimization of Fiber Scintillator Detector System for Use in Monitoring Small Animal Arterial Input Function	FRANKY HERMAN (88ESM) Assessing the Time- to-Threshold Global Warming Limits: Implications for Climate Change in Malaysia

PROGRAM SCHEDULE

25 SEPTEMBER 2024

Parallel Session 1

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11.45 am – 12.00 pm	KALSUM BINTI AHMAD MUSTAMIN (37ST) Tailoring Absorption Wavelength Window of Liquid Crystals for High Performance Organic Photovoltaics	HARTINIE MARBAWI (41NR) Morphological and Biochemical Characterization of Glyphosate- Degrading Bacteria Isolated from Agricultural Soils in Kota Marudu, Sabah	ASDALIFAH TALIBE (68MATS) Linear Programming Models for Nurse Scheduling in Neonatal Intensive Care Unit (NICU) at Hospital Keningau	DIANTA GINTING (73MSAP-INT) Optimizing Thermal Conductivity in PbTe: Nanocomposite and Alloy Approaches for Low Thermal Conductivity	ZULHERRY ISNAIN (82ESM) Mapping of Groundwater Potential Areas by using the Analytical Hierarchy Process (AHP) method in Kg. Liabas – Kg. Salimpodon, Kota Marudu, Sabah
12:00 – 12:15 pm	ROSLINA JAWAN (39ST) Impact of Protective Agents and Prebiotics on the Viability and Morphological Stability of Freeze- Dried <i>Lactobacillus</i> <i>pentosus</i> A6	FIONA ELIZA ANAK ASON (47NR) Effect of plant growth regulators and organic additive on shoot and root induction of <i>Ceologyne</i> <i>rochussenii</i> de Vriese	MOHD USRAN ALIBUBIN (79MATS) Optimized Strategy for Nonlinear Time- Fractional Diffusion Using the Half- Sweep Explicit Group Gauss-Seidel Method and Caputo Nonlocal Arithmetic-Mean Discretization	CHEE FUEI PIEN (65MSAP) Effect of Electron Beam Radiation on Optical Properties of Tellurite Glass containing Rice Husk Fibre	KAMSIA BUDIN (83ESM) Risk-Based Prioritisation of High-Risk Antibiotics on Aquatic Organism in Malaysia
12:15 – 12:30 pm	NURUL AFIFAH AZLYZAN (42ST) Heterogenous Metal Catalyst from Robust Polymeric Materials for Cross-Coupling Reactions	SABRINA SOLOI (51NR) Cellulose Hydrogels from Cogon Grass and Palm Leaves for Transdermal Drug Delivery	SUZELAWATI ZENIAN (81MATS) Image Segmentation Using Fuzzy C-Means Clustering Techniques in CT- Scan Images	ABU BAKAR ABD RAHMAN (72MSAP) Temperature- Dependent Conductivity and Optical Transparency of Sputtered Strontium Stannate Oxide (SSO) Thin Films for Advanced Optoelectronic Applications	HANI LUDIN (85ESM) P-MET MoE: Revolutionizing Oil & Gas Operations with AI-Driven Metocean Data Analytics for Insightful Decision Making
12:30 – 12.45pm	VECKLENIA JAIWAN (44ST) Quantitative Analysis of Global Solar Irradiance in Five Key Areas of Sabah and Labuan Region	RAHMATH ABDULLA (66NR) Optimization of Enzymatic hydrolysis of Sugarcane bagasse for Bioethanol Production	SITI RAHAYU MOHD HASHIM (89MATS) A Structural Equation Modeling Analysis to Investigate the Relationship Between Smartphone Addiction, Depression, Anxiety and Stress	SATURI BACO (50MSAP) Mechanical Properties of FeCo- based Magnetostrictive Thin Films by Nanoindentation Technique	MOHD AL FARID ABRAHAM (70ESM) Assessment of Organic Matter Preservation and Carbon Sequestration Potential in the Kulapis Formation, Telupid, Sabah

LUNCH BREAK

PROGRAM SCHEDULE

25 SEPTEMBER 2024

Parallel Session 2

Scope Time	Room 1: Science & Technology	Room 2: Natural Resources	Room 6: Natural Disasters AND Sustainable Community	Room 7: Medical Science & Public Health	Room 8: Multidisciplinary
	Session Chair: Assoc. Prof. ChM. Ts. Dr. Zuhair Jamain	Session Chair: Assoc. Prof. Dr. Rahmath Abdulla	Session Chair: Dr. Zulherry Bin Isnain	Session Chair: Ts. Dr. Roslina Jawan	Session Chair: Dr. Rohana Tair
2.00 – 2.15 pm	NORINI TAHIR (61ST) Synthesis and Characterization of Azine-Linked Covalent Organic Framework by Hydrothermal Method	EVIENSTEIN WILFRED (7NR) Mapping of Groundwater Potential Zones using Logistic Regression Method at Kadamaian Basin, Kota Belud, Sabah	ISFARITA ISMAIL (38ND) Coastal Vulnerability Assessment: A case study on erosion and coastal change along Likas Bay, Kota Kinabalu	TAMAR KANSIL (56MSPH) In Vivo Toxicity Analysis and Immunogenic Profiles of Selected Ethyl Acetate Mangrove Extracts from the Sulaman Wetland in Sabah Against <i>Mycobacterium tuberculosis</i>	ROHANA TAIR (25ESM) Water Quality Assessment for Drinking Water: Case Study at Mongkodou River, Ranau Sabah
2.15 – 2.30 pm	MUHAMMAD AFIF ABD RANI (62ST) Room Temperature Vulcanized Silicone Rubber (RTV-SiR) Based Nano and Microfillers Coating for High Voltage Application: A Mini Review	AZNIZA MAHYUDIN (74NR) Assessing Potential Zoonotic Reservoir in Bats' Populations from Sabah, Malaysia	HENNIE FITRIA WULANDARY SOEHADY ERFEN (54ND) Effect of Clay on Soil Engineering Properties: A Case Study along Jalan Sapi Nangoh – Beluran	MUHAMMAD AIDIL WAFI BIN ROSLI (43 MSPH) Development of A Gel-Forming Spray Formulation of Hibiscus sabdariffa Linn Extract as A Potential Alternative in Management of Diabetic Foot Ulcer in Malaysia	SYED UMAR FARUQ SYED NAJMUDDIN (69MSPH) Anti-cancer Effect of <i>Swietenia macrophylla</i> Leaves Crude Extract against Colon Cancer Cells
2.30 – 2.45 pm	MUHAMMAD AZHAR OMAR (63ST) Frequency Domain Spectroscopy-based Classifications of Moisture Content on Power Transformer Paper Insulation using Machine Learning Techniques	LING SIN YI (88NR) Petrography Study on Potential Rare Earth Element (ree)-bearing Minerals in Igneous Rocks from Sabah, Malaysia	MUHAMMAD UMAR SARIMAL (55ND) Chemical Weathering and Formation of Al-concretion from the Igneous Rock in Telupid Sabah	RODNEY PETRUS BALANDONG (59MSPH) Framework for Early Detection of Decrements in Human Vigilance	NEWATI WID (97NR) Anaerobic Digestion of Leftover Food for Nutrient recovery
2.45 – 3.00 pm	ALVIE LO SIN VOI (80ST) Revealing the effect of donor group on photophysical properties of benzothiazole derivatives	MOHD HAFIZ ABD MAJID (86NR) The Effect of Ethanol Concentration, Time, Temperature, and Solid to Solvent Ratio on the Polyphenol Content and Antioxidant Activity of Cocoa Beans (<i>Theobroma cacao</i> L.)	RODEANO ROSLEE (97ND) Debris Flow Mapping using Frequency Ratio Model at Kundasang, Ranau, Sabah, Malaysia	AMMIELLE AKIM KERUDIN (67MSPH) Biomolecular detection of ancient <i>Mycobacterium tuberculosis</i> complex DNA in Medieval York, England	NORAZLINA MOHAMMAD RIDHWAN (99ST) Effect of Drying Pre-treatment on Nutritional Content, Fatty Acid Composition, and Total Phenolic Content of Bambangan (<i>Mangifera pajang</i>) Seed and Its Fat

PROGRAM SCHEDULE

25 SEPTEMBER 2024

Parallel Session 2

Scope Time	Room 1: Science & Technology	Room 2: Natural Resources	Room 6: Natural Disasters AND Sustainable Community	Room 7: Medical Science & Public Health	Room 8: Multidisciplinary
	Session Chair: Assoc. Prof. ChM. Ts. Dr. Zuhair Jamain	Session Chair: Assoc. Prof. Dr. Rahmath Abdulla	Session Chair: Dr. Zulherry Bin Isnain	Session Chair: Ts. Dr. Roslina Jawan	Session Chair: Dr. Rohana Tair
3.00 – 3.15 pm	MOHAMMAD YADIY FIKRIY MAHATHIR (87ST) A Comparisons of Bioactive compounds In Kelulut Honey from Different Regions	ANA BINA SARI (1NR-INT) Analysis of Active Compounds of Ethanol Extract of Leaves (<i>Hippobroma longiflora</i> (L.) G. Don	MOHAMAD ZACHAREE (22SC) Microcontroller based Automation for a Sustainable Water Supply Microplant in Rural Area Applications	OLIVER DEAN JOHN (78MSPH) The Evaluation of Antioxidant and Cytotoxic Properties of <i>Garcinia mangostana</i> L. Peel Extracts and their Alpha Mangostin Contents	AHMAD NORAZHAR MOHD YATIM (98ESM) Variations of Surface Ozone Concentration in Malaysian Borneo
3.15 – 3.30 pm	NUR ZAIDA ZAHARI (30 ESM) Isolation, Screening and Characterization of Hydrocarbon Degrading Bacteria from Oil-Contaminated Soil	AZNIZA MAHYUDIN (75NR) The Interplay of Small Mammals and Their Obligate Ectoparasite: Insights from Sungai Rawog Conservation Area, With A Focus on Bat Population	MOHAMAD ZUL HILMEY MAKMUD (53SC) Mitigating Power Loss by Implementing a High-Voltage System in Nanogrid Networks for Rural Electrification	LUCKY GOH POH WAH (71 MSPH) Molecular Detection of Antibiotic Resistance Genes (<i>bla</i> OXA-23, <i>bla</i> OXA-58, and <i>bla</i> TEM) in Carbapenem-Resistant <i>Acinetobacter baumannii</i> from Sabah	
3.30 – 3.45 pm	HARRY LYE HIN CHONG (90ESM) Effect of plant and baffle on BOD and COD removals from synthetic aquaculture effluent by oil palm shell-based constructed wetlands	SUHAINI SUDI (58MSPH) Targeted Anti-Cancer Effects of <i>Octomeles sumatrana</i> on Colorectal Cancer Cells	FERA @ NONY CLEOPHAS (57SC) Small Scale Water Resource Management in Lok Dangkaan, Pitas: Recharge and Recovery Strategies for Water Supply in Coastal and Rural Communities	KRISHNAN NAIR BALAKRISHNAN (76MSPH) Optimizing the quality of SARS CoV-2 RNA extracted using RTK Antigen cassette	
3.45 – 4.00 pm	FARRAH ANIS FAZLIATUL BT ADNAN (92ESM) Plankton and Coliform As Bioindicators of Coastal Water Quality	HARDIANSHAH SALEH (96NR) An Overview of The Groundwater Potential in North-West Pitas Based on Subsurface Evaluation: A Case Study of Kg. Lok Dangkaan, Pitas, Sabah	ASSIS KAMU (60SC) Assessing Household Water Insecurity and Financial Capacity for the Cleaned Water Supply Services in Coastal Fishing Communities: A Case Study in Lok Dangkaan Village, Pitas, Sabah	LIA NATASHA AMIT (96MSPH) Genotypic Diversity and Emergence of Novel Rotavirus Strains among Children in Sabah: Implications for Public Health	
4.00 – 4.30 pm	SESSION BREAK				
4.30 – 5.00 pm	CLOSING CEREMONY (GRAND VIRTUAL ROOM)				