



CSET 2024

**The 2nd International Conference
on Sustainability and
Emerging Technologies**



**DONG NAI
TECHNOLOGY UNIVERSITY**

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206 Nguyen Khuyen Str., Quarter 5, Trang Dai Ward, Bien Hoa City, Dong Nai Province

SESSION 1	
ID/CODE	TITLE
CSET-24-008	EXTRACTION OPTIMIZATION OF ANTIOXIDANT POLYSACCHARIDE FROM <i>Acanthophora spicifera</i>
CSET-24-009	ITPR2, AN ER CALCIUM CHANNEL, REGULATES ER STRESS AND INFLAMMATORY RESPONSE IN PRE-CANCEROUS KIDNEY TUBULE CELLS
CSET-24-015	REAL-TIME HEURISTICS FOR BALANCING MIXED-MODEL ASSEMBLY LINES
CSET-24-016	EXPLORING EFFECTIVE STRATEGIES FOR EFFICIENT EXCIPLEX EMISSION IN ORGANIC LIGHT-EMITTING DIODES
CSET-24-018	IMPLICATION OF SOME SUSTAINABLE DEVELOPMENT SOLUTIONS FOR VIETNAM'S AGRICULTURE
CSET-24-019	ADVANCING RAILWAY SAFETY AND EFFICIENCY: DEVELOPMENT OF A HUMAN-FOLLOWING TRANSPORT ROBOT
CSET-24-020	EVALUATION OF DRYING METHODS AND STORAGE STABILITY OF PROTEIN POWDER FROM SALTED EGG WHITES
CSET-24-022	APPLICATION OF TWO-DIMENSIONAL HYDRODYNAMIC MODEL (MIKE21HD/FM) TO ASSESSING THE IMPACT OF SAND MINING IN THE LO RIVER AREA AND PROPOSING MANAGEMENT SOLUTIONS
CSET-24-023	STUDY OF THE ROOM-TEMPERATURE LASING OF LEAD BROMIDE PEROVSKITE THIN FILMS VIA SOLVENT ENGINEERING
CSET-24-025	FABRICATION OF BIO-COMPOSITES MATERIAL FROM WATER HYACINTH (<i>EICHHORNIA CRASSIPES</i>) AND POLYESTER RESIN
CSET-24-026	FABRICATION AND CHARACTERIZATION OF CHITOSAN-GELATIN COMPOSITE FILM
CSET-24-028	EXTRACTION OF FLAVONOIDS FROM <i>ROSA LAEVIGATA</i> MICHX USING DEEP EUTECTIC SOLVENTS AND EVALUATION OF ANTIOXIDANT ACTIVITY OF THE EXTRACT
CSET-24-030	SIMULTANEOUS EXTRACTION OF PHENOLICS AND POLYSACCHARIDES FROM <i>PADINA GYMNOSPORA</i> USING ENZYME-ASSISTED METHOD
CSET-24-033	EFFECT OF SEAWEED EXTRACT ON THE GROWTH OF <i>BRASSICA JUNCEA</i>

(CSET-24-022)

APPLICATION OF TWO-DIMENSIONAL HYDRODYNAMIC MODEL (MIKE21HD/FM) TO ASSESSING THE IMPACT OF SAND MINING IN THE LO RIVER AREA AND PROPOSING MANAGEMENT SOLUTIONS

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ABSTRACT

Phu Tho is a province with a developed mining industry, making an important contribution to economic development, creating jobs for people. In particular, the industry of exploiting sand as construction materials is also of interest to meet construction needs. However, the sand mining process impacts the environment, landscape and land area in the surrounding area. Therefore, research on application of two-dimensional hydrodynamic model (MIKE21HD/FM) to evaluate the impacts on riverbanks due to Song Lo sand mining activities, the section through Phu My commune, Phu Ninh district, Phu Tho province is necessary. In particular, sand mining lowers the river bottom, potentially changing basic hydraulic parameters such as water level, flow velocity and flow direction. The results show that after dredging all areas to the design exploitation height, the water level fluctuates from 22.16m to 20.2m. Along the center line from T1 to T10, it can be seen that the water level fluctuates, lower about 0.01m (or 1cm). From there, propose environmental management measures in sand mining, ensuring sustainable economic development goals.

Keywords: *MIKE 21FM, sand mining, sustainable economic development...*



**THANK YOU
TO ALL PARTICIPANTS**

