

ICGEC-2024

**The 16th International Conference on
Genetic and Evolutionary Computing**

Accepted Paper



宮崎大学
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ICGEC 2024 Official Website: <https://icgec24.github.io/>

Dear Authors,

Thank you very much for your contributions to ICGEC2024.

A lot of research papers from Japan, China, Taiwan, Indonesia, India, Myanmar, Thailand, and Vietnam have been submitted to ICGEC2024. All submitted papers have gone through the peer review process and the excellent papers have been accepted for the final proceedings as follows.

Paper ID: ICGEC-2024-6

Statistical analysis of A-weighted sound pressure level for courtship song of robust cicada in Tokyo 2023

Leo Misono and Kenji Muto

Paper ID: ICGEC-2024-8

Highly accurate image matching using inlier extraction of images via upper confidence bound policy

Mashiro Shimada and Hiroyuki Kamata

Paper ID: ICGEC-2024-41

Blind Underwater Image Quality Assessment Using Ensemble of Vision Transformer

Nay Chi Lynn and Tetsuya Shimamura

Paper ID: ICGEC-2024-49

Multi-channel Speech Enhancement Network Using Noise-Reference Microphone

Kota Suzuki, Yusuke Sugiura, and Tetsuya Shimamura

Paper ID: ICGEC-2024-19

Toward Implementation of Autonomous Navigation with Accelerated Map Generation for High-Accuracy Landing on Unknown Celestial Bodies

Hiroaki Miura, Haruki Omori and Hiroyuki Kamata

Paper ID: ICGEC-2024-61

Depiction of 3DCG Hula Dancers for Hula Costume Design CAD Development

Leona Kimura, Masatoshi Beppu, Satoshi Ikeda, Kaoru Ohe, and Makoto Sakamoto

Paper ID: ICGEC-2024-44

MCTR--Relevant Citation Identification of Research Articles based on Metadata, Content, Theory Congruence and Mention Rates using Multiple Regression

Kyu Kyu Win and Yi Yi Hlaing

Paper ID: ICGEC-2024-154

Construction and Accuracy Study of Agricultural Machinery Carbon Footprint Verification Model

Huan-Chang Lin Yu-Ching Chuang, Yung-Hsing Peng, Hung-Chi Wu, and Szu-Hsuan Wang

Paper ID: ICGEC-2024-11

Towards Natural Gas Consumption Prediction by Deep Learning: Case Study in Several East-Europe Countries

TuanAnh Nguyen and HongGiang Nguyen

Paper ID: ICGEC-2024-64

Optimized Block Size Valuation by Blockchain-based Hyperledger Fabric Network

Khin Su Su Wai and Nwe Nwe Myint Thein

Paper ID: ICGEC-2024-77

Cloud Cost Prediction with LSTM on Parametric Data

Khin Pyae Phyo San and Nwe Nwe Myint Thein

Paper ID: ICGEC-2024-50

Evaluation of Body Condition Score for walking dairy cows using 3D camera

Masaya Chikunami, Thi Thi Zin, Masaru Aikawa, Ikuo Kobayashi

Paper ID: ICGEC-2024-56

Arrival Time Difference Estimation Based on GCC-PHAT for Multiple Loudspeakers

Riku Kasakura, Yosuke Sugiura, and Tetsuya Shimamura

Paper ID: ICGEC-2024-62

A Study on Improvement of Operation Accuracy by Viewpoint Switching in VR

Masatoshi Beppu, Leona Kimura, Kaoru Ohe, Satoshi Ikeda, and Makoto Sakamoto

Paper ID: ICGEC-2024-68

Utilizing Behavioral Features for Predicting Calving Time

Wai Hnin Eaindrar Mg, Pyke Tin, Masaru Aikawa, Ikuo Kobayashi, Yoichiro Horii⁵, Kazuyuki Honkawa, Thi Thi Zin

Paper ID: ICGEC-2024-169

Auto Labeling for Liver CT Image Based on Edge Detection and Region of Interest Segmentation

Jun-Yan Horng, Jiun-Huei Ho, Chun-Chih Lo, Chin-Shiuh Shieh, and Mong-Fong Horng

Paper ID: ICGEC-2024-14

A Lightweight Approach for Identifying DDoS Attacks Using Boosting Models and Hybrid Feature Selection

Soe Kalayar Naing and Tin Thein Thwel

Paper ID: ICGEC-2024-17

Proposal of a Document Layout Analysis Method Adopting Pre-processing Based on Document Image Classification

Kanta Kakinoki and Tetsuro Katayama

Paper ID: ICGEC-2024-40

Context-Aware Personality Recognition from User Generated Text Using Deep Learning

Zan Mo Mo Aung and Myo Khaing

Paper ID: ICGEC-2024-45

Monthly Weather Data Collection and Alert System using Time Series LSTM Model

San Nyein Khine, Zaw Tun and Ye Naing

Paper ID: ICGEC-2024-52

Automated Cattle Identification via Image-Based Ear Tag Recognition *Yuichiro Shimizu, Thi Thi Zin, Masaru Aikawa, and Ikuo Kobayashi*

Paper ID: ICGEC-2024-57

Performance Evaluation of Edge Detectors for Automated Book Spine Segmentation in Library Bookshelf Images

Myat Min Maung, Zu Zu Aung and Than Than Nwe

Paper ID: ICGEC-2024-76

Cattle Lameness Detection Using Leg Region Keypoints from a Single RGB Camera

Bo Bo Myint, Thi Thi Zin, Masaru Aikawa, Ikuo Kobayashi³ and Pyke Tin,

Paper ID: ICGEC-2024-168

A Smart Sensor for Gait Analysis of Rehabilitation Assessment

Chang-Ang Lee, Che-Wi Chou, Chih-Shiuh Shieh, Mong-Fong Horng, Shu-Wei Guo

Paper ID: ICGEC-2024-3

Handheld Pig-weight Estimation Using an RGB-D Sensor

Khin Dagon Win, Kikuhito Kawasue, Tadaaki Tokunaga, Yusuke Iki

Paper ID: ICGEC-2024-5

Recognition of Viewer's Gazing Interest with YOLOv7 and SVM Technologies for Smart Advertising Displays

Chun-Chung Cheng and Chih-Peng Fan

Paper ID: ICGEC-2024-43

Facial Expression Recognition using Convolutional Neural Network with Residual Units and Attention Mechanism

Moe Moe Htay and Zin Mar Win

Paper ID: ICGEC-2024-48

Mask Segmentation and Evaluation based on Mask Scoring R-CNN

Yu-Cheng Fan, Xiaomin Liu and Shen-Chin Chang

Paper ID: ICGEC-2024-67

A Comparative Analysis of Convolutional Neural Networks (CNN) and Long Short-Term Memory (LSTM) Networks for Forecasting Stock Prices Over a One-Week Horizon at Yangon Stock Exchange

Kyaw Kyaw Khaing, Ah Nge Htwe and Andrew Lewis

Paper ID: ICGEC-2024-70

From Vision to Vocabulary: A Multimodal Approach to Detect and Track Black Cattle Behaviors

Su Myat Noe, Thi Thi Zin , Pyke Tin and Ikuo Kobayashi

Paper ID: ICGEC-2024-71

An Abnormal Behavior Recognition System for Bathrooms with Using Toilet Based on Thermal Image AI Edge Computing Technology

Wan-Jung Chang , Jia-Hong Liu, Yi-Jia Chen, and Liang-Bi Chen

Paper ID: ICGEC-2024-54

Comprehensive Analysis to understand the potential of Embelin in Ulcerative Colitis: An Integrated approach of Weighted Gene Expression Analysis and Random Forest algorithm

Prashanth S Javali and Kavitha Thirumurugan

Paper ID: ICGEC-2024-55

Computational Insights into WSSV Virulent Protein Interactions with Perfluorotributylamine from Halmonas salifodinae

Vernita Priya and Sudhakaran Raja

Paper ID: ICGEC-2024-80

Emerging Horizons in Renal Cell Carcinoma Therapy: Impact of Cuproptosis-related miRNAs on RCC

Subeka Abraham Gnanadass and Pragasam Viswanathan

Paper ID: ICGEC-2024-81

Transcriptome Analysis reveals key genes and Regulatory Networks in Early-onset Pre-eclampsia via integrated Bioinformatics Approach

Tamil Barathi Palanisamy and Mohanapriya Arumugam

Paper ID: ICGEC-2024-141

A Graph Clustering Algorithm Based on Gravitational Vector

Jitao Li, Yao Yao, Chugui Xu and Xue Tian

Paper ID: ICGEC-2024-152

Application of Willow Catkin Optimization Algorithm for Wireless Sensor Network

Shu-Chuan Chu, Buyue Guo, Bing Sun, Hong-Mei Yang and Jeng-Shyang Pan

Paper ID: ICGEC-2024-153

A dimensional difference-based population size adjustment framework for Gannet optimization algorithm

Jeng-Shyang Pan, Kunpeng Han, Shu-Chuan Chu, Zhi Li and Li Zhang

Paper ID: ICGEC-2024-2

Molecular Phylogeny of Rhodotorula Yeasts Based on the Sequencing of 18S Ribosomal RNA Gene

Tungse W, Nuntapong N, Tantikitti C and Suanyuk N

Paper ID: ICGEC-2024-7

Low-Cost Indoor Smart-Aquaculture System for Endangered Species and Some Common Thai Freshwater Fish

Nopparat Tanmark, Nutt Nuntapong, Naraid Suanyuk, Akkarawit Issaro and Chutima Tantikitti

Paper ID: ICGEC-2024-51

Identification of Rumination Patterns in Cattle Through Optical Flow Analysis and Machine Learning Techniques

Taichi Ishikawa, Thi Thi Zin, Masaru Aikawa, Ikuo Kobayashi

Paper ID: ICGEC-2024-10

Molecular identification of Cordyceps javanica PSUC001 and its potential control strategy of the brown plant hopper Nilaparvata lugens (Stål) (Hemiptera: Delphacidae)

Peerasak Bunsap, Sinlapachai Senarat, Seree Niyomdecha, Chaninun Pornsuriya and Narit Thaochan

Paper ID: ICGEC-2024-159

In Silico Assessment of 16S rRNA Primer Specificity for Targeted Bacterial Amplification: A Case Study with Vibrio parahaemolyticus

Kittichon U-taynapun, Nutsara Intharasuwan and Nion Chirapongsatonku

Paper ID: ICGEC-2024-84

Automatic Body Temperature Detection in Calves and Alarm System Using Thermographic Camera

Aung Si Thu Moe, Thi Thi Zin, Masaru Aikawa and Ikuo Kobayashi

Paper ID: ICGEC-2024-160

A Phylogenetic Update of Azospirillum Using Recent 16S rRNA Data

Nion Chirapongsatonkul, Wiriyaporn Srisuksai, Butsarakorn Ratchapol, Agnesia Frisca Damayanti, and Kittichon U-taynapun

Paper ID: ICGEC-2024-88

Empowering Information Retrieval and Prediction of Socioeconomic Indicators through Knowledge-Driven Data Models

Trinh-Dong Nguyen, Trong-The Nguyen, Thi-Kien Dao, Thanh-Trong Le, Quang-Ky Le

Paper ID: ICGEC-2024-142

Dual-Population-Iterating and Preys-Gathering MPA for XGBoost optimization

Jiacheng Li, Li Lv, Ping Kang, Xiumei Tian

Paper ID: ICGEC-2024-155

Detection of Unknown Darknet Traffic with Random Forest

Dong-Yu Lee, Thanh-Lam Nguyen, Chin-Shiuh Shieh, Mong-Fong Horng, Casper Tsai and Denis Miu

Paper ID: ICGEC-2024-156

Multi-Class Attack Detection in IoT Using Dimensionality Reduction with Stacked Autoencoders and Classification with Long Short-Term Memory Networks

Yu-Xian Lee, Chin-Shiuh Shieh, Mong-Fong Horng, Ying-Chieh Chao Prasun Chakrabarti

Paper ID: ICGEC-2024-157

UAV image matching based on graph neural network

Li Qiqi, Meng Lingyue, Liu Xiaomin, Zhao Huaqi and Liu Zhuo

Paper ID: ICGEC-2024-161

General capability evaluation of autonomous navigation based on similarity calculation

Hongtao Yin, Hao Zhang, Lixin Zhang

Paper ID: ICGEC-2024-164

Analysis of Schema Formation in Genetic Algorithms: A Review

Tiancong Zhang, Shaowei Weng, Shu-Chuan Chu, Thi-Kien Dao, Trong-The Nguyen

Paper ID: ICGEC-2024-165

Evolving Effective Drug Therapies with Multi-Objective Genetic Algorithm

Tiancong Zhang, Shaowei Weng, Shu-Chuan Chu, Trong-The Nguyen, Thi-Kien Dao

Paper ID: ICGEC-2024-143

Feature Intracorrelation and Weighted Mahalanobis Distance for Fuzzy Support Vector Machine

Lan Jiang, Li Lv, Siwei Peng, and Haihua Xie

Paper ID: ICGEC-2024-151

Lightweight Remote Sensing Target Detection Algorithm based on Improved YOLOv5

Chaomin Wang, Fang Dong, Sheng Liang, Wanxin Yu, Kaixian Wu, Wang Wenfeng and Long Yu

Paper ID: ICGEC-2024-1

Biomechanical Analysis of the Effect of Tibial Slope and Tibial Tunnel Angle on the Tibial Tunnel During Posterior Cruciate Ligament Reconstruction

Fan Yang, Takuji Yokoe, Koki Ouchi, Takuya Tajima, Etsuo Chosa

Paper ID: ICGEC-2024-36

GIS-based Optimal Evacuation Path and Water Resources Finding for Fire Emergency Using Modified A* Algorithm

Lei Lei Win and Nilar Thein

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Evaluating Pipeline Architecture with Apache Kafka and Apache Flink: Data-Driven Architecture

Chan Min Kyaw and Nwe Nwe Myint Thein

Paper ID: ICGEC-2024-78

An Attempt to Solve Fill in the Missing Letters CAPTCHA Using Generative AI

Hisaaki Yamaba, Shotaro Usuzaki, Kentaro Aburada, Masayuki Mukunoki, Mirang Park and Naonobu Okazaki

Paper ID: ICGEC-2024-79

Effective Task Scheduling using Particle Swarm Optimization (PSO) with Various Offloading Strategies in Fog-Cloud Computing Environment

Zun Myat Myat Soe, Tin Zar Thaw and Yu Mon Zaw

Paper ID: ICGEC-2024-82

Risk Management Model for Cloud-based Learning Platform in Academic Institution

Moe Moe San and Khin May Win

Paper ID: ICGEC-2024-20

A Technique based on Deep Learning for Classifying Rice Leaf Disease Using Pre-Trained Models

Lai Yee Win Lwin and Ah Nge Htwe

Paper ID: ICGEC-2024-29

Dependency Parsing Using Recurrent Neural Network on Myanmar Language

Nwe Nwe Win and Win Pa Pa

Paper ID: ICGEC-2024-31

Towards Infrastructure Automation using IaC in the era of GenAI

Han Min Myat, Myat Pwint Phyu and Aye Myat Myat Paing

Paper ID: ICGEC-2024-34

Evacuation support system for tsunami disasters that considers shelter congestion

Hidetaka Nishi, Keita Nabeyama, Shotaro, Kentaro Aburada, Hisaaki Yamaba, Tetsuro Katayama, Naonobu Okazaki and Mirang Park

Paper ID: ICGEC-2024-37

A Scalable Architecture for Improving Adaptive Bitrate Streaming Services

Taofik Lamsub and Pichaya Tandayya

Paper ID: ICGEC-2024-69

Cattle Lameness Classification Using Cattle Back Depth Information

San Chain Tun, Pyke Tin, Masaru Aikawa, Ikuo Kobayashi, and Thi Thi Zin

Paper ID: ICGEC-2024-13

A Secure IoT Network for Healthcare Systems Based on Quantum Key Distribution Protocol and AES Encryption

Myat Su Win and Khaing Khaing Wai

Paper ID: ICGEC-2024-15

Detection of Malicious Activities in IoT Network based on Enhanced Dimensional Feature Reduction and BLSTM

Yee Mon Thant, Zin Thu Thu Myint, Chaw Su Htwe

Paper ID: ICGEC-2024-24

Impact of Imbalanced Data on Apache Spark

Thet Hsu Aung and Aye Myat Myat Paing

Paper ID: ICGEC-2024-72

Detection of Script Reading Face in Diet Deliberation Video

Tsuyoshi Yamaguchi, Takeshi Saitoh and Haibo Zhang

Paper ID: ICGEC-2024-73

Adsorption Model Analysis on Semimetal Anions Using Cross-linking Chitosan Nanofiber Introduced Xylose

Kaoru Ohe, Miku Furukawa and Tatsuya Oshima

Paper ID: ICGEC-2024-83

Individuality Prediction of Pain Facial Expressions Based on Permanent Wrinkles

Tsuyoshi Moriyama and Wang Xubo

Paper ID: ICGEC-2024-23

Land use land cover change analysis based on Deep Learning and SVM Classifier using Geospatial data (Case study Mandalay Township)

Aye Mya Thein and Ah Nge Htwe

Paper ID: ICGEC-2024-42

Comparative Performance Analysis of Classification Methods for Educational Data, Rakhine State

Thaung Myint Tun and Zaw Tun

Paper ID: ICGEC-2024-85

Cow's Back Surface Segmentation of Point-cloud Image using PointNet++ for Individual Identification

Pyae Phyo Kyaw, Pyke Tin, Masaru Aikawa, Ikuo Kobayashi, Thi Thi Zin

Paper ID: ICGEC-2024-139

Applying Digital Restoration Techniques in Preservation of Ancient Murals using Diffusion-Based Inpainting

Khant Khant Win Tint, Mie Mie Tin (University of Technology, Thi Thi Zin and Pyke Tin

Paper ID: ICGEC-2024-140

Next generation sequencing exome data analysis aids in the discovery of SNP and INDEL patterns in Parkinson's disease

Rajasree Odumpattaa and Mohanapriya Arumugama

Paper ID: ICGEC-2024-170

A Mathematical Framework for Reinforcement Learning in Healthcare: Modeling and Analysis in Artificial Intelligence

Cho Nilar Phyo, Thi Thi Zin, Hiromitsu Hama and Pyke Tin

Paper ID: ICGEC-2024-12

Numerical Examination on Resonance Properties of Slot Ring Resonator with Throughput and Drop Ports for Biosensing

Mitsuhiro Yokota and Yoshihiro Naka

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Performance Investigation of a New Chaotic Search Method for Vehicle Routing Problem with Drones

Kazuma Nakajima, Takafumi Matsuura, and Takayuki Kimura

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Real-Time Video Denoising Acceleration Using Pixel Shuffle and FP16

Riku Masuko, Yosuke Sugiura, and Tetsuya Shimamura

Paper ID: ICGEC-2024-65

Investigating Visual Illusions in Convolutional Neural Networks Using Spiral Illusion Images

Kenji Aoki, Takuya Togo and Makoto Sakamoto

Paper ID: ICGEC-2024-66

Acoustic Feature Extraction Method for Piglet Call Detection

Tenma Nakano, Yosuke Sugiura, Tetsuya Shimamura, Yoshiyuki Nakamura and Ayaka Miyazaki

Paper ID: ICGEC-2024-75

FxlogLMS+ : Modified FxlogLMS Algorithm for Active Impulsive Noise Control

Aoi Haneda, Yosuke Sugiura and Tetsuya Shimamura

Paper ID: ICGEC-2024-137

Enhancing Wind Instrumentalists' Performance: Evaluating the MVP Support System with OpenPose Motion Capture

Yasumasa Yamaguchi and Taku Kawada

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Time-Driven Cost Estimation Learning Model

Theethawat Savastham and Nikom Suvonvorn

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A Study on Health Management by Behavior Analysis of Calve

Taketo Nishiyama, Shiiya Kazuhisa, Masaru Aikawa, Ikuo Kobayashi, Thi Thi Zin

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Research on Individual Identification of Walking Cows using a 3D Camera

Yo Shiihara, Thi Thi Zin, Masaru Aikawa and Ikuo Kobayashi

Paper ID: ICGEC-2024-74

A Study on the Comparison of various Preprocessing Methods for Bengali Character Recognition using Convolutional Neural Network

Md Shafayet Jamil and Hiroki Tamura

Paper ID: ICGEC-2024-167

Vision Enhancement System with AR Wearable Aid for Low-Vision People

Jing-Hong Chen and Chien-Chou Lin

Paper ID: ICGEC-2024-158

The correlation between fractal dimension and subjective assessment of scene landscape in game Ghost of Tsushima – from multi-ethnic analysis to single-ethnic analysis

Xiaohan Mei and Yoichi Kunii