

**Paper ID: ICGEC-2023-A01**

Paper Title: Analysis on the Influence of Regional Agricultural Planting Factors on Grain Yield Based on Genetic Feedback Process Neural Network

Author(s): Yuan Tian, Yongquan Liang

**Paper ID: ICGEC-2023-A02**

Paper Title: Analysis of the coordination of highway network in urban agglomerations based on fractal theory

Author(s): Meng-Jun Mei, Ding Chen, Zhe-Ming Lei, Bin Hu

**Paper ID: ICGEC-2023-A03**

Paper Title: Path Planning Based on YOLOX and Improved Dynamic Window Approach

Author(s): Xin Zhang

**Paper ID: ICGEC-2023-A04**

Paper Title: The Role of Reputation–Aspiration in the Evolution of Cooperation

Author(s): Xin Ge, Yue Liu, Lili Li

**Paper ID: ICGEC-2023-A05**

Paper Title: A New Membrane Algorithm based on Quasi-Affine TRansformation Evolution for Optimization Problems

Author(s): Xiaopeng Wang, Václav Snášel, Seyedali Mirjalili, Shu-Chuan Chu, Hisham A. Shehadeh

**Paper ID: ICGEC-2023-A06**

Paper Title: UAV Path Planning Based on Improved QUATRE Algorithm in Different Environments

Author(s): Xin Zhang, Gengfeng Zheng, Haolong Chen, Song Chen

**Paper ID: ICGEC-2023-A07**

Paper Title: A Hybrid Algorithm ACS-GA for Solving the Traveling Salesman Problem

Author(s): Zhonghai Bai, Václav Snášel, Vo Bay, Lingping Kong, Xiaopeng Wang

**Paper ID: ICGEC-2023-A08**

Paper Title: Efficient Weighted Sequence Pattern Mining

Author(s): Shaotao Chen, Jiahui Chen, Shicheng Wan

**Paper ID: ICGEC-2023-A09**

Paper Title: Exploring the Integration of Neural Networks in Quality-Oriented Education for Undergraduates: Evolutionary Computing-Based Personalized Learning Path Recommendation

Author(s): Xiaoyu Dong, Miaomiao Zhao

**Paper ID: ICGEC-2023-A10**

Paper Title: Evaluation of Deep Clustering for Assessing Undergraduate Understanding in Ideological and Political Education: Data-Driven Analytics

Author(s): Miaomiao Zhao, Xiaoyu Dong

**Paper ID: ICGEC-2023-A11**

Paper Title: Lightweight Dialog State Tracking Methods Based on RoBERTa for Resource Constrained Dialog Systems

Author(s): Dapeng Li, Shuliang Wang, Boxiang Zhao, Zhiqiang Ma, Xin Xin

**Paper ID: ICGEC-2023-A12**

Paper Title: An ETC missed transaction data restoration approach for expressways considering multiple scenario features

Author(s): Zhaoyi Zhou, Fumin Zou, Qiqin Cai

**Paper ID: ICGEC-2023-A13**

Paper Title: Emotional Visualization Analysis Based on Online Book User Comments

Author(s): Jingxiu Xu, Albert A. Vinluan

**Paper ID: ICGEC-2023-A14**

Paper Title: Multi-Scale Convolution Kernels and Residual Components for Deciduous Leaves Detection

Author(s): Ta-Wen Kuan, Xiaodong Yu, Shunlian Luo, Yuh-Chung Lin, Ying Chen, Yanze Wang

**Paper ID: ICGEC-2023-A15**

Paper Title: Yolo v3 for Market MBFVS Food Materials Detection

Author(s): Ta-Wen Kuan, Xiaodong Yu, Qi Wang, Yihan Wang

**Paper ID: ICGEC-2023-A16**

Paper Title: Parallel and Distributed MOEA/D with Virtual Overlapping Zone and Exclusively Evaluated Mating

Author(s): Xinyuan Zhu, Yuji Sato, Mads Midtlyng, Mikiko Sato, Jia Guo

**Paper ID: ICGEC-2023-A17**

Paper Title: A study on the Application of Immersive Technology in the Art Exhibition‘Exploring Shan Hai Jing’

Author(s): Qian Jiang

**Paper ID: ICGEC-2023-A18**

Paper Title: Research on Value-added Evaluation of University Teachers based on University functions

Author(s): Lin Li, Shi wei, Ta Wen Kuan

**Paper ID: ICGEC-2023-A19**

Paper Title: The implementation of the graduation thesis topic selection

Author(s): Xiumei Tian, Yanhong Jiang

**Paper ID: ICGEC-2023-A20**

Paper Title: Class Incremental Learning Method for Hyperspectral Images Based on Real Data Playback Mechanism and Classification Network Optimization

Author(s): Xiaodong Liu, Siqi Wang, Huanyu Liu, Junbao Li

**Paper ID: ICGEC-2023-A21**

Paper Title: Student-t Process Prior Variational Autoencoder for Anomaly Detection in Time Series

Author(s): Xiaowei Fu, Lei Bao

**Paper ID: ICGEC-2023-A22**

Paper Title: Modeling of Drama Performance Intelligent Evaluation Driven by Multimodal Data

Author(s): Zhen Song, Yufeng Wu, Longfei Zhang, Wenting Tao, Lijie Li, Gangyi Ding

**Paper ID: ICGEC-2023-A23**

Paper Title: Deep learning-based speed limit information recognition

Author(s): Xu Luo, Fumin Zou, Sijie Luo, Feng Guo

**Paper ID: ICGEC-2023-A24**

Paper Title: Vehicle identification model of expressway service area based on ETC transaction data

Author(s): Fumin Zou, Yi You, Qiqin Cai, Feng Guo

**Paper ID: ICGEC-2023-A25**

Paper Title: Pattern Mining Local Search Heuristics for Dynamic Pickup Delivery Problems

Author(s): Connor Little, Salimur Choudhury, Kai Salomaa

**Paper ID: ICGEC-2023-A26**

Paper Title: Hierarchy Affective Knowledge Enhanced Emotion Recognition Model

Author(s): Sufen Chen, Xiaofang Nie, Xueqiang Zeng

**Paper ID: ICGEC-2023-A27**

Paper Title: Application of Genetic Algorithm to Optimize Bicycle Lighting Order Scheduling

Taking Company E as an Example

Author(s): Kevin Huang, Guan Dazhong, Zhang Yinqi

**Paper ID: ICGEC-2023-A28**

Paper Title: Enhancing Manufacturing Efficiency through the Integration of Smart Manufacturing and Virtual Reality Technologies

Author(s): Kuan-chun Huang, Shu-Wei Wu

**Paper ID: ICGEC-2023-A29**

Paper Title: Research on the Application of Taguchi Theory to Verify the Improved Bamboo Forest Growth Optimization Algorithm

Author(s): Yin-Chi Chang, Kevin Huang, Da-Zhong Guan

**Paper ID: ICGEC-2023-A30**

Paper Title: Integrating Virtual and Real System Platforms based on IIoT Technology - A Case Study of PLC and Automation Studio

Author(s): Kuan-Chun Huang, Wen-Yen Huang

**Paper ID: ICGEC-2023-A31**

Paper Title: Automobiles Driving Data Recording Method Based on Internet of Vehicles and Blockchain Technologies

Author(s): Chuan-Sheng Hung, Shi-Huang Chen, Chun-Hung Richard Lin

**Paper ID: ICGEC-2023-B01**

Paper Title: Binary Growth Optimizer: for Solving Feature Selection Optimization Problems

Author(s): Shu-Chuan Chu, Zhi-Chao Dou, Jeng-Shyang Pan, Lingping Kong, Tien-Szu Pan

**Paper ID: ICGEC-2023-B02**

Paper Title: A New Coati Optimization Algorithm for Binary Optimization

Author(s): Gui-Ling Wang, Shu-Chuan Chu, Jeng-Shyang Pan, Dongqiang Yang, Chin-Shiuh Shieh

**Paper ID: ICGEC-2023-B03**

Paper Title: Bamboo Forest Growth Optimization Algorithm for Night Image Enhancement

Author(s): Hao-Jie Shi, Jeng-Shyang Pan, Shu-Chuan Chu, Lingping Kong, Václav Snášel

**Paper ID: ICGEC-2023-B04**

Paper Title: Generalization of Relay Node Deployment Problem for Wireless Sensor Network on jMetal

Author(s): Lingping Kong, Petr Gajdos, Jeng-Shyang Pan, Václav Snášel

**Paper ID: ICGEC-2023-B05**

Paper Title: Application and effectiveness evaluation of BP neural network model based on Rafflesia Optimization Algorithm optimization in daily average temperature prediction  
Author(s): Zhen Zhang, Shu-Chuan Chu, Jeng-Shyang Pan, Wei Li, Hongmei Yang

**Paper ID: ICGEC-2023-B06**

Paper Title: Application research on biological posture recognition based on deep neural network  
Author(s): Xue-Qian Zheng, Ding Chen, Xin Yuan, Jing Sheng

**Paper ID: ICGEC-2023-B07**

Paper Title: Overview of Reversible data hiding for JPEG images  
Author(s): Tiancong Zhang, Wei Chen, Chunyu Zhang, Shu-Chuan Chu

**Paper ID: ICGEC-2023-B08**

Paper Title: Flow field characterization of reverse osmosis membrane based on CFD  
Author(s): Yang Zhang, Ding Chen, Shilin Sha, Jing Sheng

**Paper ID: ICGEC-2023-B09**

Paper Title: Structural Analysis of Contact System of High-Voltage DC Relay under Electrical-Thermal-Structural Coupling  
Author(s): Chao Liang, Guo-Fei Yu, Jin-Liang Jiang, Jun-Xiong Liu

**Paper ID: ICGEC-2023-B10**

Paper Title: Research on the Structure Design of Body Clothing for Elderly Women  
Author(s): Tian-tian Xu, Ke-ke Sun

**Paper ID: ICGEC-2023-B11**

Paper Title: Gannet optimizer-based clustering scheme for wireless sensor networks  
Author(s): Longkang Yue, Jeng-Shyang Pan, Shu-Chuan Chu, Shi-Huang Chen, Junzo Watada

**Paper ID: ICGEC-2023-B12**

Paper Title: Parallel Artificial Rabbits Optimization Algorithm for Image Watermarking  
Author(s): Han Gao, Weimin Zheng, Minghui Zhu

**Paper ID: ICGEC-2023-B13**

Paper Title: Robust Target Detection and Localization for UAV Autonomous Landing with Partially Occluded Targets  
Author(s): Mingmei Shao, Yanyan Liu , Jiaze Tang, Huanyu Liu, Junbao Li

**Paper ID: ICGEC-2023-B14**

Paper Title: Image Captioning with Global Information Enhanced Image Representation

Author(s): Xun Wang, Yanyan Liu, Huanyu Liu, Dan Guo, Jia Zhai, Junbao Li

**Paper ID: ICGEC-2023-B15**

Paper Title: Analysis of half-space acoustic radiation in 3D based on fast multipole boundary element method

Author(s): Bing-rong Zhang

**Paper ID: ICGEC-2023-B16**

Paper Title: A parallel Slime Mould Algorithm with Boundary rebound and Knowledge-sharing mechanism

Author(s): HongYe Fan, Shu-Chuan Chu, Xiao Sui, Jeng-Shyang Pan

**Paper ID: ICGEC-2023-B17**

Paper Title: Design technology of multi-AGV Warehouse Intelligent Scheduling Optimization Control System

Author(s): YanPeng Pan, XueTing Zhang, FuQuan Zhang, LiLi Tan, LiJie Yang, Jun Ma

**Paper ID: ICGEC-2023-B18**

Paper Title: Recent Evolutionary Computing Algorithms and Industrial Applications: A Review

Author(s): Shu-Chuan Chu, Thi-Kien Dao, Thi-Minh-Phuong Ha, Truong-Giang Ngo, Trong-The Nguyen

**Paper ID: ICGEC-2023-B19**

Paper Title: Intellectual Property Protection of Image Processing Models with Watermarking

Author(s): Yuxuan Du, Linlin Tang, Qing Liao, Yang Liu, Shuhan Qi, Jiajia Zhang

**Paper ID: ICGEC-2023-B20**

Paper Title: SE(3)-Diffusion: An Equivariant Diffusion Model for 3D Point Cloud Generation

Author(s): Yong Peng, Linlin Tang, Qing Liao, Yang Liu, Shuhan Qi, Jiajia Zhang

**Paper ID: ICGEC-2023-B21**

Paper Title: A multi-objective wolfpack algorithm based on randomized wandering and hierarchical learning

Author(s): Wenfei Dong, Runxiu Wu, Feng Lv, Jia Zhao

**Paper ID: ICGEC-2023-B22**

Paper Title: An Optimal Power System Operation Planning Based on Enhanced Cuckoo Search Algorithm

Author(s): Jeng-Shyang Pan, Trong-The Nguyen, Trinh-Dong Nguyen, Thi-Xuan-Huong Nguyen,

Thi-Kien Dao

**Paper ID: ICGEC-2023-B23**

Paper Title: Dynamic Detection of multi-forked Tree Gantry Anomaly Based on Isolated Forest Algorithm

Author(s): Yue Xing, Fumin Zou, Feng Guo

**Paper ID: ICGEC-2023-B24**

Paper Title: Vehicle traveling speed prediction based on LightGBM algorithm

Author(s): Nan Li, Fumin Zou, Feng Guo

**Paper ID: ICGEC-2023-B25**

Paper Title: A Feature Matching Method based on Rolling Guided Filter and Collinear Triangular Matrix Optimal Transport

Author(s): Liu Xiaoming, Yuan Yizhao, Li Qiqi, Zhao Huaqi

**Paper ID: ICGEC-2023-B26**

Paper Title: Short-time driving style classification and recognition method on expressway

Author(s): GuangHao Luo, FuMin Zou, Feng Guo, ChenXi Xia

**Paper ID: ICGEC-2023-B27**

Paper Title: Expressway Short-term Traffic Flow Prediction Based on CNN-LSTM

Author(s): Ting Ye, Fumin Zou, Feng Guo

**Paper ID: ICGEC-2023-B28**

Paper Title: Expressway Traffic Speed Prediction Method Based on KF-GRU model via ETC data

Author(s): ChenXi Xia, FuMin Zou, Feng Gou, GuangHao Luo

**Paper ID: ICGEC-2023-B29**

Paper Title: Dynamic Brightness Adjustment of Tunnel Lighting Based on ETC Transaction Data

Author(s): Shilong Zhuo, Fumin Zou, Feng Guo, Xinrui Zhao

**Paper ID: ICGEC-2023-B30**

Paper Title: Short-time traffic flow prediction of highway toll station based on combined GRU-MLP model

Author(s): Wenyu Chen, Fumin Zou, Feng Guo

**Paper ID: ICGEC-2023-B31**

Paper Title: Real-time carbon emission monitoring and prediction method of expressway based on LSTM

Author(s): Xinrui Zhao, Fumin Zou, Feng Guo, Sirui Jin

**Paper ID: ICGEC-2023-B32**

Paper Title: PSR-GAN: Unsupervised Portrait Shadow Removal Using Evolutionary Computing

Author(s): Tianlong Ma, Longfei Zhang, Xiaokun Zhao, Zixian Liu

**Paper ID: ICGEC-2023-B33**

Paper Title: Chebyshev Inequality and the Identification of Genes Associated with Alzheimer's Disease

Author(s): Lei Yu, Xueli Tan, Delin Luo, Lin Yang, Xinping Pang, Zhengchao Shan, Chengjiang Zhu, Jeng-Shyang Pan, Chaoyang Pang

**Paper ID: ICGEC-2023-B34**

Paper Title: A novel crossover operator based on Grey Wolf Optimizer applied to feature selection problem

Author(s): Wenbo Guo, Yue Sun, Xinping Pang, Lin Yang, Lei Yu, Qi Zhang, Ping Yang, Jeng-Shyang Pan, Chaoyang Pang

**Paper ID: ICGEC-2023-B35**

Paper Title: Research on the Detection Method of Sybil Attacks on Wireless Terminals in Power Internet of Things

Author(s): Daming Xu, Kelin Gao, Zhongbao Hou, Li Zhang, Zhipei Wei, Qi Li, Yuzhu Ding

**Paper ID: ICGEC-2023-B36**

Paper Title: Probability Vector Enhanced Tumbleweed Optimization Algorithm

Author(s): Yang-Zhi Chen, Ruo-Bin Wang, Hao-Jie Shi, Rui-Bin Hu, Lin Xu

**Paper ID: ICGEC-2023-B37**

Paper Title: Improving BFGO with Apical Dominance-Guided Gradient Descent for Enhanced Optimization

Author(s): Hao-Jie Shi, Feng Guo, Yang-Zhi Chen, Lin Xu, Ruo-Bin Wang

**Paper ID: ICGEC-2023-B38**

Paper Title: Research on Innovative Social Service Training Mode in Higher Vocational Colleges under the New Situation

Author(s): Wei Zong, Dawei Luo

**Paper ID: ICGEC-2023-B39**

Paper Title: Research on the Precise Teaching Path of Higher Vocational Colleges under the Concept of OBE in the Digital Era



Author(s): Juan Luo

**Paper ID: ICGEC-2023-B40**

Paper Title: An Optimal Inventory Replenishment Strategy with Cross-docking System and Time Window Problem

Author(s): Yen-Deng Huang, Simon Wu, Xue-Fei Yuan

**Paper ID: ICGEC-2023-B41**

Paper Title: Proposal of a DDoS Attack Detection Method Using the Communication Interval

Author(s): Kosei Iwasa, Shotaro Usuzaki, Kentaro Aburada, Hisaaki Yamaba, Tetsuro Katayama, Mirang Park, Naonobu Okazaki

**Paper ID: ICGEC-2023-B42**

Paper Title: Study of an image-based CAPTCHA that is resistant to attacks using image recognition systems

Author(s): Sojiro Nishikawa, Shotaro Usuzaki, Kentaro Aburada, Hisaaki Yamaba, Tetsuro Katayama, Mirang Park, Naonobu Okazaki

**Paper ID: ICGEC-2023-B43**

Paper Title: Blind Image Quality Assessment Using Standardized NSS and Multi-Pooled CNN

Author(s): Nay Chi Lynn, Yosuke Sugiura, Tetsuya Shimamura

**Paper ID: ICGEC-2023-B44**

Paper Title: Abnormal Activity Detection based on Place and Occasion in Virtual Home Environments

Author(s): Swe Nwe Nwe Htun, Shusaku Egami, Duan Yijun, Ken Fukuda

**Paper ID: ICGEC-2023-B45**

Paper Title: Proposal of Fill in the Missing Letters CAPTCHA Using Associations from Images

Author(s): Hisaaki Yamaba, Muhammad Nur Firdaus Bin Mustaza, Shotaro Usuzaki, Kentaro Aburada, Masayuki Mukunoki, Mirang Park, Naonobu Okazaki

**Paper ID: ICGEC-2023-B46**

Paper Title: Digital Transformation (DX) Solution for Monitoring Mycoplasma Infectious Disease in Calves: A Worldwide Health Challenge

Author(s): Cho Nilar Phyto, Pyke Tin, Hiromitsu Hama, Thi Thi Zin

**Paper ID: ICGEC-2023-B47**

Paper Title: AI Driven Movement Rate Variability Analysis Around the Time of Calving Events in Cattle

Author(s): Wai Hnin Eaindrar Mg, Pyke Tin, Masaru Aikawa, Ikuo Kobayashi, Yoichiro Horii, Kazuyuki Honkawa, Thi Thi Zin

**Paper ID: ICGEC-2023-B48**

Paper Title: Channel-wise Pruning via Learn Gates&BN for Object Detection Tasks

Author(s): Min-Xiang Chen, Po-Han Chen, Chia-Chi Tsai

**Paper ID: ICGEC-2023-B49**

Paper Title: Lane following strategy for autonomous Drones with Concurrent Features Fusion Attention Deep Learning Networks

Author(s): Chao-Yang Lee, Abida Khanum

**Paper ID: ICGEC-2023-B50**

Paper Title: Prediction of Sepsis Mortality Risk Based on Ensemble Learning Algorithm FBTV

Author(s): Xuan Zhang, Lixin Huang, Teng Fu, Yujia Wu

**Paper ID: ICGEC-2023-B51**

Paper Title: Research on the Influence Mechanism of College Students' Learning Satisfaction Based on the Chain Mediation Model

Author(s): Xin Guo, YiChen Yang, Zilong Yin, Ying Chen, Yujia Wu

**Paper ID: ICGEC-2023-B52**

Paper Title: Design of license plate recognition system based on machine vision

Author(s): Xu Yang, Ming Hui Zhang, Ming Chao Zhang

**Paper ID: ICGEC-2023-B53**

Paper Title: Construction and application of knowledge graph in the field of medical food supplements

Author(s): Wei Hong Yu, Ming Hui Zhang, Ming Chao Zhang

**Paper ID: ICGEC-2023-B54**

Paper Title: Practice and exploration of discrete mathematics teaching in applied undergraduate colleges under the background of new engineering

Author(s): Ming Hui Zhang, Ming Chao Zhang

**Paper ID: ICGEC-2023-B55**

Paper Title: Research on Production Line Balance Optimization Based on Improved PSO-GA Algorithm

Author(s): PEI Zhijian, DENG Zhihui, SHI Xinmin

**Paper ID: ICGEC-2023-B56**

Paper Title: Prediction and analysis of stroke risk based on Ensemble learning

Author(s): Xiuji Zuo, Xin Guo, Zilong Yin, Shih-Pang Tseng

**Paper ID: ICGEC-2023-B57**

Paper Title: The Users' purchase Behavior Research of Buying Clothing of Live Streaming eCommerce on Tiktok

Author(s): Hang Zheng, Zhiqiang Zhu

**Paper ID: ICGEC-2023-B58**

Paper Title: Exploration on the Evaluation Index System of E-commerce Application Talents' Literacy for Industry Needs

Author(s): Zhiqiang Zhu

**Paper ID: ICGEC-2023-B59**

Paper Title: Research on Cosmetics Consumer Behavior Analysis and Marketing Strategy Optimization on E-Commerce Platform “Xiaohongshu”

Author(s): Xuwei Zhang, Zhiqiang Zhu

**Paper ID: ICGEC-2023-B60**

Paper Title: DOA Estimation of Special Non-uniform Linear Array Based on Quantum Honey Badger Search Algorithm

Author(s): Yaqing Zheng, Hongyuan Gao, Yulong Qiao

**Paper ID: ICGEC-2023-B61**

Paper Title: Chewing Behavior Detection Based on Facial Dynamic Features

Author(s): Cheng-Zhe Tsai, Chun-Chih Lo, Chin-Shiuh Shieh, Mong-Fong Horng

**Paper ID: ICGEC-2023-B62**

Paper Title: Unknown DDoS Attack Detection using Open-Set Recognition Technology and Fuzzy C-Means Clustering

Author(s): Hao Kao, Thanh-Tuan Nguyen, Chin-Shiuh Shieh, Mong-Fong Horng, Denis Miu

**Paper ID: ICGEC-2023-B63**

Paper Title: Dairy cow behavior recognition technology based on machine learning classification

Author(s): Che-Wei Chou, Chang-Ang Lee, Shu-Wei Guo, Chin-Shiuh Shieh, Mong-Fong Horng

**Paper ID: ICGEC-2023-B64**

Paper Title: PSO-based CI Agent with Learning Tool for Student Experience in Real World Application

Author(s): Chang-Shing Lee, Mei-Hui Wang, Chih-Yu Chen, Che-Chia Liang, Sheng-Chi Yang, Dominik Woiwode, Alexander Dockhorn

**Paper ID: ICGEC-2023-B65**

Paper Title: A GA-based Scheduling Algorithm for Semiconductor-Product Thermal Cycling Tests

Author(s): Yeong-Chyi Lee, Tzung-Pei Hong, Yi-Chen Chiu, Chun-Hao Chen

**Paper ID: ICGEC-2023-B66**

Paper Title: Power Internet of Things Security Evaluation Method Based on Fuzzy Set Theory

Author(s): Yuman Wang, Hongbin Wu, Yilei Wang, Zixiang Wang, Xinyue Zhu, Kexi-ang Qian

**Paper ID: ICGEC-2023-B67**

Paper Title: A Q-Learning Based Power-Aware Data Dissemination Protocol for Wireless Sensor Networks

Author(s): Neng-Chung Wang, Chao-Yang Lee, Ming-Fong Tsai, Hsu-Fen Fu, Wei-Jung Hsu

**Paper ID: ICGEC-2023-B68**

Paper Title: An improved multi-criteria decision making method using Fuzzy Incomplete Linguistic Preference Relations

Author(s): Pham Thi Hong Yen, Wang Tien-Chin

**Paper ID: ICGEC-2023-B69**

Paper Title: A comparison of Fuzzy AHP and Fuzzy LinPreRa in the MCDM process

Author(s): Tien-Chin Wang, Yen Thi Hong Pham