



CPGIS

GeoInformatics 2024

August 14-16, 2024
TORONTO, CANADA

Conference Preliminary Programme

The 31st International Conference on Geoinformatics

Date: Tuesday, 13/Aug/2024

3:00pm - 6:00pm	Registration Location: Sears Atrium
6:00pm - 7:00pm	Reception Location: Sears Atrium

Date: Wednesday, 14/Aug/2024

8:00am - 9:00am	Registration Location: ENG Hallway			
9:00am - 10:30am	Opening & Keynote Session 1 Location: ENG103			
10:30am - 11:00am	Coffee/Tea Break Location: ENG Hallway			
11:00am - 12:30pm	Oral 01: Point Cloud Processing Location: ENG101 Chair: Dr. Derek T Robinson , University of Waterloo HD-LIO: A Robust LiDAR-Inertial Odometry for High-Definition Mapping in High-Dynamic Environments Shida Wang , Hangbin Wu, Kewen Lu, Xiaolu Liu SANet: Space-aware Network for Urban-Scale	Oral 02: Environmental Remote Sensing I Location: ENG102 Chair: Prof. Yuhong He , University of Toronto Mississauga Design of a Novel NDVI Camera Linking Ground-to-Satellite Vegetation Observation Yonghua Qu , Qi Zhao Mapping Changes in Vegetative Ecosystems Using Remote Sensing Yuhong He	Oral 03: Geospatial Methods I Location: ENG105 Chair: Dr. Ran Tao , University of South Florida Machine Learning and Multicriteria Evaluation for Spatial Suitability Analysis Lan Qing Zhao , Suzana Dragičević, Alysha van Duynhoven Locating and Orienting Facilities with Anisotropic Coverage	Oral 04: GeoHealth I Location: ENG106 Chair: Prof. F. Benjamin Zhan , Texas State University Radon and Lung Cancer: Current Status and Future Prospects Yan Liu , Yanqing Xu An Improved Deep Learning Pulmonary Tuberculosis Prediction Model Hong Fan , Fei Xiao

	<p>Point Clouds Semantic Segmentation <u>Wenxiao Zhan</u>, Jing Chen</p>		<p><u>Enbo Zhou</u>, Alan Murray, Jiwon Baik, Jing Xu</p>	<p>Genetic Risk Factor Associated with Early-Onset Colorectal Cancer and its Geographic Variations Based on Data from The UK Biobank <u>F. Benjamin Zhan</u>, Mei Yang</p>
	<p>Forest Monitoring Tool (FMT): A Novel Approach to Point Cloud Processing for Urban Forest Management <u>Christopher Scarpone Scarpone</u>, Andrew A. Millward, Anders Knudby, Stephanie Melles</p>	<p>Monitoring Woody Plant Encroachment with Remote Sensing <u>Xulin Guo</u></p>	<p>Identifying Arbitrarily Shaped Hotspots with Tightened Scanning Window <u>Xiaorui Yan</u>, Zhuoting Fu, Tao Pei, Zidong Fang</p>	
	<p>Unlocking Urban Environments: A Comprehensive Framework for Enhanced CityGML 3D Models Development Using Point Cloud Data <u>Mohamed Ismail</u>, Ahmed Shaker, Songnian Li</p>	<p>The Impact of Different Grazing Intensity and Management Measure on Temporal and Spatial Distribution of Grassland Soil Organic Carbon Density in Zhangye, China <u>Meiling Zhang</u>, Xinjing Wang, Chen Wang</p>	<p>Mind the “Forgotten Middle”: A New Statistic to Measure Bivariate Spatial Association <u>Ran Tao</u>, Jean-Claude Thill</p>	<p>Integrating Reinforcement Learning and Agent-based Models for Low-Income Housing Allocation: A Case Study of Chongqing <u>Tingting Xu</u>, Jiahui Yang, Jiafei Ba</p>
	<p>Efforts to Quantify Individual Tree Carbon Stocks Using Remotely Piloted Aircraft Systems <u>Derek T Robinson</u>, Chenxi Liu, Brandon Giura</p>	<p>Use of Microwave and Optical Images for National and Global Forest Resources Assessment: Annual Forest Maps of the Contiguous United States <u>Xiangming Xiao</u>, Jie Wang, Yuan Yao, Yuanwei Qin</p>	<p>An Improved Hierarchical Clustering Method Based on the k-NN and Density Peak Clustering <u>Zhicheng Shi</u></p>	<p>Analysis of Factors Influencing the incidence of Pulmonary Tuberculosis in the Beijing Tianjin Hebei Region of China <u>Sirui Li</u>, Hong Fan</p>
<p>12:30pm - 1:30pm</p>	<p>Lunch Location: ENG Hallway</p>			
<p>1:30pm - 3:00pm</p>	<p>Oral 05: Smart Transportation Location: ENG101 Chair: <u>Dr. Xiaobai Angela Yao</u>, University of Georgia</p>	<p>Oral 06: Environmental Remote Sensing II Location: ENG102 Chair: <u>Prof. Dongmei Chen</u>, Queen's University</p>	<p>Oral 07: Building Modeling & Analysis Location: ENG105 Chair: <u>Prof. Bisheng Yang</u>, Wuhan University</p>	<p>Oral 08: GeoHealth II Location: ENG106 Chair: <u>Dr. Fahui Wang</u>, Louisiana State University</p>
	<p>Calibrating Driving Flow Data through Spatio-Temporal Graph Attention Networks: Integrating Big and Small Data <u>Hao Chen</u>, Xianghui Zhang, Xiaowei Gao, Tao Cheng</p>	<p>Classification of Ice and Water In a Regulated River Using Convolutional Neural Networks <u>Yifan Qu</u>, Andrea Scott, Denise Sudom</p>	<p>UAV-Based Multi-Sensor Data Fusion for 3D Building Detection <u>Mohsen Shahraki</u>, Ahmed El-Rabbany, Ahmed El-Amin</p>	<p>Disparities in Physical and Virtual Accessibility of Oncologists in the U.S. <u>Fahui Wang</u>, Hanqi Li, Lingbo Liu, Tracy Onega</p>
	<p>How Shareable Is Your Trip? A Path-based Analysis Of Ridesplitting Trip Shareability <u>Guan Huang</u>, Zhan Zhao, A.G.O Yeh</p>	<p>Multi-source Remote Sensing Image Classification Based on Multi-modal Fusion Transformer <u>Fan Yang</u>, Wenmei Li, Yuhong He</p>	<p>Data Quality Evaluation of Multiple Building Footprint Datasets in Toronto: A Comparative Study <u>Peyman Azari</u>, Songnian Li, Ahmed Shaker AbdElrahman</p>	<p>User Experience Matters: Inequality in Spatial Accessibility of Highly-Rated Healthcare Services in Major U.S. Cities <u>Binbin Lin</u>, Lei Zou</p>

	<p>Analyzing Daily Travel Patterns within Spatial-social Network Communities <u>Xiaobai Angela Yao</u></p>	<p>Exploring the Potential of Advanced Deep Learning Algorithms for Missing Data Reconstruction of Historical Landsat Time-Series (1984-Present) <u>Masoud Babadi Ataabadi</u>, Dingmei Chen, Darren Pouliot, Temitope Seun Oluwadare</p>	<p>Structural Stability Assessment of Ancient Buildings Based on Multi-Level BIM <u>Ruiling Zhang</u>, Miaole Hou, Youqiang Dong, Shuqiang Lyv</p>	<p>Investigating the Impacts of Social Deprivation on Preterm Birth in Georgia, USA Using Bayesian Multilevel Models <u>Wei Tu</u></p>
	<p>Monitoring, Inspection And Early Warning System In Electrical Distribution Networks Using Satellite Images Erick Armando Sedeño Bueno, <u>José Luis Capote Fernández</u>, René González Rodríguez, Nelson Ivan Escalona Macides</p>	<p>Automated Urban Tree Root Detection Using Ground Penetrating Radar (GPR) And Artificial Neural Networks <u>Justin Miron</u>, Andrew Allan Millward</p>	<p>Automatic Assessment Of Window View Distance For High-rise, High-density Areas Using 3D Semantic Segmentation And OpenGL Rendering Of City Information Models <u>Maosu Li</u>, Fan Xue, Anthony Gar-On Yeh</p>	<p>Exploring the path to One Health: Insights on synergies, trade-offs, and priority targets for Global and National Progress <u>Ya Tian</u>, Junze Zhang, Hui Lin, Min Chen</p>
	<p>Geographical Spatial Characteristics and Low-carbon Sustainable Paths of Resource-exhausted Cities <u>Xiaotong Feng</u>, Min Tan, Jihong Dong, Thomas Kienberger</p>	<p>Assessing the Capacity of the SDGSat-1 Glimmer Imagery in Measuring Sustainable Development Goals (SDGs) <u>Bailang Yu</u>, Shaoyang Liu, Congxiao Wang, Zuoqi Chen</p>	<p>Solar PV Potential Assessment on 3D buildings Based on Multi-Source RS Data <u>Zhe Chen</u>, Bisheng Yang, Rui Zhu, Fuxun Liang, Peiling Tong, Zhen Dong</p>	<p>Is Green Space a Public Health Issue and How to Measure “Vitamin G”? <u>Lan Mu</u>, Jue Yang, Nemin Wu, Jielu Zhang, Mohammed Almusidi</p>
3:00pm - 3:30pm	<p>Coffee/Tea Break Location: ENG Hallway</p>			
3:30pm - 5:00pm	<p>Oral 09: Digital Twin Location: ENG101 Chair: Prof. Shabnam Jabari, University of New Brunswick</p> <p>Development Of Digital Twin For Managing Building Water Distribution Systems On University Campuses <u>Gopika Rajan</u>, Songnian Li</p> <p>The Digital Twins of Convective Weather <u>Mingyue Lu</u></p> <p>Urban Digital Twin for Climate Resilience: A Review of Generation, Data Challenges, and Climate Responsive Applications <u>Shabnam Jabari</u>, McGrath Heather</p>	<p>Oral 10: Agriculture Location: ENG102 Chair: Prof. Wanhong Yang, University of Guelph</p> <p>CropSight - Towards a National-scale Operational Framework for Object-based Crop Type Ground Truth Retrieval Using Street View and PlanetScope Satellite Imagery <u>Zhijie Zhou</u>, Yin Liu, Chunyuan Diao</p> <p>Within-season Crop Classification Based on Key Phenological Period Features Prediction with a Multi-task Learning Network <u>Tianyu Liu</u>, Jin Chen, Qiang Li</p>	<p>Oral 11: Geospatial Methods II Location: ENG105 Chair: Dr. Daoye Zhu, University of Toronto</p> <p>Idle Occupancy and Dead Piles: New Challenges in Public Charging Station Promotion <u>Mushu Zhao</u>, Dawei Wang, Weifeng Li</p> <p>Enhancing Youbike Redistribution System: A Study on Station Recommendation Using Genetic Algorithm <u>Yang-Chou Juan</u>, Yi-Chung Chen, Wei-Ting Chen, Chieh Yang, Chia-Tzu Liu, Yi-Ci Hou, Yi-Hsuan Tsai</p> <p>GIS-based Platform for Resilience Assessment of</p>	<p>Oral 12: Land Use & Land Cover Location: ENG106 Chair: Prof. Jinfei Wang, The University of Western Ontario</p> <p>The Impact of Rapid Urban Growth on Land Use and Land Cover Change and Urban Heat Island: The Case of Babuzai, Pakistan <u>Fahad Shah</u></p> <p>Fusion of Google Street View, LiDAR, and Orthophoto classifications based on a Ranking method for Building Land-Use Type Detection <u>Nafiseh Ghasemian Sorboni</u>, Jinfei Wang, Mohammad Reza Najafi</p>

	<p>Environmental Modeling of Poyang Lake Wetland Under the Background of Digital Twin <u>Hao Chen</u>, Changyang Fang, Hui Lin</p>	<p>Analysis Of Cultivated Land Fragmentation And Its Influencing Factors In Northern China Qianyu Nie, <u>Shuang Zhao</u>, Zhiheng Wang, Dingyang Zhang</p>	<p>a Power Grid Subjected to Natural Hazards <u>Daoye Zhu</u>, Yuhong He, Oh-Sung Kwon, Taeyong Kim, Qiujin Ma, Sahand Najafizadegan</p>	<p>Classifying Raw Irregular Time series (CRIT) for large area land cover mapping by adapting Transformer model Hankui Zhang, Dong Luo, Zhongbin Li</p>
	<p>Modelling Potential Solar Panel Glare On Pilot Arrival And Departures Using Unreal Engine <u>Hongliang Lyu</u>, Derek T. Robinson</p>	<p>Field-level Crop Yield Estimation through Integration of Crop Model and Deep Learning <u>Tianci Guo</u>, Chunyuan Diao</p>	<p>Skyscrapers And Their Impact On Urban Tree Solar Exposure: A 3D Geospatial Analysis <u>Andrew Allan Millward</u>, Christopher Scarpone, Justin Miron</p>	<p>Exploitation of Class Activation Map to Improve Land Cover and Land Use Classification Using Deep Learning <u>Taewoong Ham</u>, Baoxin Hu</p>
		<p>A WebGIS Tool for Evaluating Ecosystem Services on Agricultural Landscapes <u>Wanhong Yang</u>, Shawn Shao, Yongbo Liu, Zhiqiang Yu</p>	<p>Exploring Distance-decay And Spatial Differentiation Of Railway Trips: A Case Study In Guangdong, China <u>Yongqi Deng</u>, Jue Wang, Jiaorong Wu, Zili Tian</p>	<p>Examining the Impact of Various Green Area Coverage on Air Pollution Using Remote Sensing Data and Google Earth Engine <u>Amin Naboureh</u>, Ainong Li</p>

6:00pm - 7:00pm CPGIS night
Location: **ENG103**

Date: Thursday, 15/Aug/2024

8:00am - 9:00am Registration
Location: **ENG Hallway**

9:00am - 10:30am Keynote Session 2
Location: **ENG103**

10:30am - 11:00am Coffee/Tea Break
Location: **ENG Hallway**

<p>11:00am - 12:30pm</p>	<p>Oral 13: Weather and Climate Location: ENG101 Chair: Prof. Xiaoyong Xu, University of Toronto</p> <p>“The Thirstiest Crop” in the U.S. Southwest: Mapping the Impact of Alfalfa Cultivation on Water Security and Ecological Functioning in the Lower Colorado River Basin <u>Yuntian Bi</u>, Zhijie Zhou</p>	<p>Oral 14: Environmental Remote Sensing III Location: ENG102 Chair: Prof. Bing Lu, Simon Fraser University</p> <p>Investigating a Flooding Disaster in British Columbia and its Damages on Agriculture using Remote Sensing and GIS <u>Bing Lu</u>, Ian McDonald</p>	<p>Oral 15: Geospatial Methods III Location: ENG105 Chair: Prof. Jue Wang, University of Toronto</p> <p>Integrating Low-Cost Sensor Monitoring, Satellite Mapping, and Geospatial Modeling for Intra-Urban Air Pollution Predictions <u>Lu Liang</u></p>	<p>Oral 16: Watershed & Wetland Analysis Location: ENG106 Chair: Dr. Yongbo Liu, ECCC</p> <p>Characterization of Lake Catchments Leveraging Remote Sensing Data <u>Junzhi Liu</u></p>
		<p>Monitoring Restoration Efforts in Pits and</p>	<p>Spatial Modeling of Urban Environmental Noise</p>	<p>Development Of A GIS-Based Modeling Tool For Watershed</p>

	<p>Assessments of Global Drought Trends and Conversions using SPEI datasets in the last four decades <u>Simon Measho Yhdego</u>, Baozhang Chen, Yu Ke</p>	<p>Quarries in Southern Ontario Using Drone and Field Surveys <u>Sana Hashim</u>, Yuhong He, Daniel Nelson, Matthew Noonan</p>	<p>Using Geospatial Big Data and Geo-AI Techniques <u>Jue Wang</u>, Yongzhao Wu</p>	<p>Evaluation Of Best Management Practices <u>Yongbo Liu</u>, Wanhong Yang, Shawn Shao, Zhiqiang Yu</p>
	<p>Urbanization Exacerbated Extreme Meteorological Drought: Analysis Over Five Urban Agglomerations in the Yangtze River Basin, China <u>Shuzhe Huang</u>, Chao Wang, Nengcheng Chen</p>	<p>Understanding Remote Sensing Imagery Like Reading a Text Document: What Can Remote Sensing Image Captioning Offer? <u>Xiao Huang</u></p>	<p>Artificial Intelligence and Human Geography <u>Song Gao</u></p>	<p>From Lake to Lakeplace: A Case Study of Lake-Related Human Activities in the Twin Cities <u>Meicheng Xiong</u>, Di Zhu</p>
	<p>The Spatial and Temporal Variation Analysis of Groundwater Storage in the Mongolian Plateau Based on Multi-Source Remote Sensing Data <u>Kai Li</u>, Juanle Wang</p>	<p>Development and Practices of Innovative Cultivation Modes for Training Talents in Surveying and Mapping <u>Jianghong Zhao</u>, Xueqing Zhang, Ailin Xu, Yihong Zhang</p>	<p>Mapping The Landscape And Roadmap of GeoAI in Human Geography: an Extensive Systematic Review <u>Sign (Sisi) Wang</u></p>	<p>Evolution Analysis of the Yellow River Delta Wetland Supported by Remote Sensing Data <u>Xin Zhang</u></p>
	<p>A Generative Adversarial Network-based Downscaling Framework for Reconstructing the High-resolution Precipitation <u>Honglin Zhu</u>, Qiming Zhou</p>	<p>GIS-Enabled Site Investigation for the Mekong River in Thailand <u>Netsai Wiboonwipa</u>, Georgia Fotopoulos</p>	<p>A Bionic Encoding Method Of Geospatial Location For Htm Systems <u>Zugang Chen</u>, Guoqing Li, Shaohua Wang</p>	<p>Comprehensive Assessment Of Future Agricultural Meteorological Disaster Risks In The Heilongjiang Basin Under Climate Change <u>Congrong Li</u>, Juanle Wang</p>
<p>12:30pm - 1:30pm</p>	<p>Lunch Location: ENG Hallway</p>			
<p>1:30pm - 3:00pm</p>	<p>Oral 17: GeoHealth III Location: ENG101 Chair: Dr. Byeonghwa Jeong, University of Toronto</p> <p>Geospatial Analytics to Support District Efficiency, Fairness and Equity <u>Jiwon Baik</u>, Alan Murray, Enbo Zhou, Jing Xu</p> <p>Gender Imbalance and its Spatial Mechanism of Interprovincial Migration in China during the 21st Century <u>Ziying Sheng</u>, Yingxia Pu</p>	<p>Oral 18: Interdisciplinary I Location: ENG102 Chair: Prof. Jane Liu, University of Toronto</p> <p>Research on Economic Value Estimation and Spatial-temporal Variation of Natural Resource Element Based on City Scale <u>Yuqi Tang</u>, Anni Wang, Qi Zhang, Penglin Zhang</p> <p>Evaluation of Urban Eco-Environmental Quality Change by the Downscale Remote Sensing Ecological Index (DS-</p>	<p>Oral 19: Interdisciplinary II Location: ENG105 Chair: Prof. Fang Qiu, University of Texas at Dallas</p> <p>Automatic Detection Of Deer from UAV Thermal Imagery Using A You-Look-Twice (YLT) Deep Learning Model <u>Fang Qiu</u>, Lyu Haitao</p> <p>Event/Visual/IMU Integration For UAV-Based Indoor Navigation <u>Ahmed Elamin</u>, Ahmed El-Rabbany</p>	<p>Oral 20: Interdisciplinary III Location: ENG106 Chair: Prof. Jue Wang, University of Toronto</p> <p>Spatial Distribution and Influencing Factors of Digital Creative Industry from the Perspective of Spatial Production: A Case Study of Shenzhen <u>Zhivi Gan</u>, Yan Zhang, Nengjun Chen, Ruipeng Li</p> <p>Utilizing Remote Sensing and Geospatial Data for Temporal and Spatial</p>

	<p>Scale Effects-aware Bottom-up Population Estimation Using Weakly Supervised Learning <u>Jing Xia</u>, Rui Li</p>	<p>RSEI) in Beijing from 2001 to 2021 <u>Sijia Zhao</u>, Qiang Chen, Hui Han, Shisong Cao, Yuning Feng, Wen Song</p>	<p>Geo-Regions Make Impacts on Asiatic Black Bears' Behaviors <u>Xuehua Liu</u>, Ao Cui, Babar Zahoor</p>	<p>Dynamic Evaluation in Rural Revitalization <u>Shuyang Hou</u></p>
	<p>Typology of Downtown Recovery at the Granular Scale <u>Byeonghwa Jeong</u>, Karen Chapple, Jeff Allen</p>	<p>A Multi-Source Data Fusion Framework for Urban Science Research Tasks <u>Yuan Lai</u>, Mingyi Ma</p>	<p>Enhancement of Forest Road Construction Year Accuracy Through Geometric Connectivity <u>Kirsten Noltie</u>, Dongmei Chen, Marc Ouellette, Tarmo Rimmel</p>	<p>Spatial Distribution of Traditional Villages and Influencing Factors in Rural China <u>Yajie Zeng</u>, Shaolin Wu, Baofeng Di</p>
	<p>Measuring Human Activities Resilience Patterns Under Emergencies Events Using Multi-source Location-based Service Data <u>Xuehua Han</u>, Liang Wang, Dandan Xu, Min Zhang, Xiaodong Zhang</p>	<p>Estimation of Monthly Gross Value of Industrial Output using improved Spatiotemporal-CNN with NPP-VIIRS composite data and multi-source geospatial data <u>Wenkang Gong</u>, Bailang Yu</p>	<p>Individual Tree Crown Detection and Delineation Using Mask R-CNN with LiDAR Data in a Mixed-Wood Forest <u>Qian Li</u>, Baoxin Hu</p>	<p>Unravelling Spatiotemporally Heterogenous Life-cycle Carbon Mitigation of Existing Rooftop Photovoltaics: GIS and Remote Sensing Data Modelling <u>Rui Zhu</u>, Zheng Qin, Linlin You</p>
		<p>Earth Surface System Scientific Data Mining and Knowledge Discovery: A Case Study of the Mongolian Plateau <u>Juanle Wang</u></p>		<p>How to Understand Carbon Intensity? A Comparative Study of China and Europe from Relationship between Rural Development Forms and Carbon Emission Intensity <u>Jiaqi Li</u>, Yishao Shi</p>
<p>3:00pm - 3:30pm</p>	<p>Coffee/Tea Break Location: ENG Hallway</p>			
<p>3:30pm - 5:00pm</p>	<p>Poster Session Location: ENG Hallway</p> <p>"Modeling the Spatio-temporal Land-cover Change in Cities: Integrating Green Infrastructure Improvement and Urban Sprawl" <u>Marina Ribeiro</u>, Kaline de Mello, Dongmei Chen, Roberta Valente</p>	<p>Poster Session Location: ENG Hallway</p> <p>The Design of Mobile Sensing Framework for Road Surface based on Multi-modal Sensors <u>Haiyang Lyu</u>, Huang Yu, Jianchun Hua, Wangta Ma, Tianju Wu, Hanru Zhang</p>	<p>Poster Session Location: ENG Hallway</p> <p>Methane Dynamics in Inner Mongolia: Unveiling Spatial, Temporal Variations, and Driving Factors <u>Yan Sirui</u>, Xie Yichun, Han Ge, Meng Xiaoliang, Li Ziwei</p>	<p>Poster Session Location: ENG Hallway</p> <p>Assessment and Prediction of Ecosystem Service Value based on landuse/landcover: A case study of Enugu, Nigeria <u>Peter Nweze Ekwe</u>, Dorcas Dabo Hamza, Michael Chibuikwe Ekwe, Caleb Akoji Odiji</p>
	<p>A Combined EEG and Eye Tracking Research for Visual Attention of Remote Sensing Images <u>Bing He</u>, Weihua Dong</p>	<p>Understanding the Disparate Impacts of the 2021 Texas Winter Storm and Power Outages Through Mobile Phone Location Data and Nighttime Light Images</p>	<p>Point Cloud Simplification Algorithm Based On Neighborhood Normal Vectors And FCM Clustering Feature Extraction <u>Hongxiao Xu</u>, Donglai Jiao, Wenmei Li</p>	<p>Mongolia Gobi Fine Extraction Based On Deep Learning And Its Resource And</p>

<p>Automatic UAV Fire Segmentation based on Attention Mechanism and Multi-scale Feature Fusion <u>Haigang Sui</u>, WeiCheng Jiang, Peng Cheng, Han Li, Jianxun Wang, Junyi Liu, Yong Zeng</p>	<p><u>Ryan Zhenqi Zhou</u>, Yingjie Hu, Lei Zou, Heng Cai, Bing Zhou</p> <p>Unsupervised Domain Adaptive Transfer Learning for Urban Built-up Area Extraction <u>Feifei Peng</u>, Yixiang Chen, Shuai Yao, Wenmei Li</p>	<p>Study on Automated Three-Dimensional Modeling Methods for Underground Pipelines <u>Wangqiang Xu</u></p> <p>The Influence of Vegetation Cover and Climatic on the Maximum Freezing Depth of Seasonally Frozen Ground in the Three River Source Region <u>Bo Wen</u>, Tingbin Zhang, Guihua Yi, Dongmei Chen, Jiao Hu, Xian Liu</p>	<p>Environment Effect Analysis <u>Mengmeng Hong</u>, Juanle Wang</p> <p>Estimating rainfed groundnut's leaf area index using Sentinel-2 based on Machine Learning Regression Algorithms and Empirical Models <u>Michael Chibuike Ekwe</u>, Oluseun Adeluyi, Jochem Verrelst, Angela Kross, Caleb Akoji Odiji</p>
<p>Combining Deep Learning and Street View Images for Urban Building Color Research Wenjing Li, <u>Qian Ma</u>, Zhiyong Lin</p>	<p>Winter Wheat Canopy Height Extraction and Biomass Prediction from UAV-Based LiDAR Point Cloud Data <u>Pai Du</u>, Jinfei Wang, Bo Shan</p>	<p>Spatial-temporal Evolution of Land Desertification Sensitivity in Mu Us Sandy Land Ecological Function Reserve Yahao Wu, <u>Xianglei Liu</u>, Runjie Wang, Yuhang Liu, Ming Huang, Liang Huo</p>	<p>Using Geographically Weighted Regression to Explore County Subdivision Level Predictors of Drug Overdose Death in Connecticut, U.S. <u>Yunliang Meng</u></p>
<p>Delineating the Polycentric Urban Regions in Multimodal Transport Networks: A Conceptual Development Using the Case of Yangtze River Delta <u>Yueer Zhou</u>, Linbo Li, Yahua Zhang</p>	<p>A Framework for the Representation and Composition of Wetland Computing Services Using Knowledge Graphs <u>Xin Xiao</u>, Hui Lin</p> <p>A Reasoning Method for Urban Waterlogging Cases Considering The Characteristics Of Knowledge Graph Subgraphs <u>Yaqin Sun</u>, Yutong Liu, Tongfei Yang</p>	<p>The Response of Discharge Water to Production-Living-Ecological Space Changes by Using SWAT Model: A Case Study in Fenhe River Basin, China Junzhe Zhang, <u>Azhar Ali Laghari</u>, Qingxia Guo, Jiayao Liang, Zhenghao Liu, Yongheng Shen, Yuehan Wei</p>	<p>Land Use/Land Cover Changes of Basai Wetland using GIS Techniques <u>Vipin Solanki</u></p>
<p>Mapping China's Annual Forest Age at 30-m Spatial Resolution from 1986 to 2022 <u>Rong Shang</u>, Xudong Lin, Jing M. Chen, Yunjian Liang</p>	<p>Constructing Rasterized Covariates from LiDAR Point Cloud Data via Structured Query Language <u>Rory Clifford Pittman</u>, Baoxin Hu</p>	<p>Urban Functional Area Mapping By Integrating Multi-source Data And Spatial Relationship Characteristics <u>Xu Dang</u>, Daoyou Zhu, Yixiang Chen, Wenmei Li</p>	<p>Utilizing CYGNSS Data for Flood Monitoring and Analysis of Influencing Factors Yan Jia, <u>Quan Liu</u>, Dawei Zhu, Heng Yu, Yuting Jiang, Junjie Wang</p>
<p>Risk Assessment of Global Serious Flood Disasters Based on Historical Data and Machine Learning Xiuqin Fang, Yu Yang, Wen Zhu, <u>Qiuhan Zhu</u></p>	<p>Design and Implementation of Geographic Scene Visualization System Based on GIS <u>Yunlong Feng</u>, Changfeng Jing, Jianing Li, Tao Liang</p>	<p>Research on Spatial Interpolation Methods of Temperature Data Based on GIS—Taking Jiangxi Province as an Example</p>	<p>Analysis of Building Daylighting Based on Bim and Numerical Simulation Technique Baihui Yu, Xianglei Liu, Runjie Wang, <u>Ming Huang</u>, Liang Huo</p>
<p>Spatially Seamless Downscaling of SMAP Soil Moisture Product through a CNN-Based Approach with Integrated Multi-Source Remote Sensing Data Yan Jin, <u>Haoyu Fan</u>, Zeshuo Li, Yaojie Liu</p>	<p>Detecting Polder Water Surface Dynamics Using</p>		<p>Urban Intensification Using Remote Sensing and Machine Learning in Toronto: A</p>

	<p>Subtropical Tree Species Identification Based On Domain Generalization With Hyperspectral Images <u>Xu Wang</u>, Wenmei Li, Yuhong He</p> <p>Sustainable Urbanization in the Yangtze River Basin: A Comprehensive Analysis of Land Use Efficiency in Typical Cities Yan Jin, <u>Zeshuo Li</u>, Haoyu Fan, Yaojie Liu</p> <p>The Advertisement and Rental Price An Exploratory Analysis from Zoopla in Scotland, 2010—2020 <u>Zhiya Xu</u>, Mingshu Wang, Ziqi Li</p>	<p>Multi-Source Remote Sensing Data <u>Heng Yu</u>, Dawei Zhu, Yan Li, Chao Lu, Rui Zhang, Junjie Wang, Yan Jia</p> <p>Development of a Natural Disaster Information System (NDIS) for RPAS Monitoring of Environmental Hazards, and Disasters <u>Robiah Al Wardah</u>, Alexander Braun</p> <p>Early-season Crop Mapping Using Historical Labels and Multi-source Remote Sensing Data on the Google Earth Engine <u>Xin Zhou</u>, Jinfei Wang, Du Pai</p>	<p>Zihao Feng, <u>Runjie Wang</u>, Xianglei Liu, Ming Huang, Liang Huo</p> <p>Vital Natural Habitats And Environmental Factors For Overwinter Waterbirds Population Distributions In Natural Wet China's Largest Freshwater Lake Yirong Wan, <u>Linling Tang</u>, Zihui Huang, Qiangqiang Xu, Xiongyu Chen</p> <p>A DID based Unsupervised Method for Change Detection of Season-varying Images <u>Yuheng Yuan</u>, Jin Chen, Xuehong Chen, Qiang Li</p> <p>A Fast Fusion Modeling Method For Disaster Scenes Within Mobile Virtual Reality Enhanced by Multi-source Data Perception <u>Jigang You</u>, Jun Zhu, Pei Dang, Jinbin Zhang</p>	<p>Spatiotemporal Approach <u>Yat Ho Cheung</u>, Jinfei Wang, Diana Mok</p> <p>Spatiotemporal Analysis of Carbon Emissions and Uptake Changes from Land-use in the Yangtze River Delta Region <u>Cuiheng Ye</u>, Jie Jiang, Yan Jin</p> <p>Construction and Application of an Ecological Quality Evaluation System Based on PIE-Engine <u>Pengdu Li</u>, Cuiheng Ye, Lei Li, Jie Jiang</p> <p>Rendering 2D Map Vector Symbols in 3D Geographic Scene <u>Jiangfeng SHE</u></p>
6:30pm - 10:00pm	<p>Conference Cruise Dinner Location: Toronto Obsession III Cruise</p>			
<p>Date: Friday, 16/Aug/2024</p>				
8:00am - 9:00am	<p>Registration Location: ENG Hallway</p>			
9:00am - 10:30am	<p>Keynote Session 3 Location: ENG103</p>			
10:30am - 11:00am	<p>Coffee/Tea Break Location: ENG Hallway</p>			
11:00am - 12:30pm	<p>Oral 21: Geosocial Media Data Analytics Location: ENG101 Chair: Dr. Xi Gong, University of New Mexico</p> <p>Social Network Analysis of Nonprofits in Disaster Response: The Case of Twitter During the COVID-19 Pandemic in the United States</p>	<p>Oral 22: Carbon Location: ENG102 Chair: Prof. Hui Yang, China University of Mining and Technology</p> <p>An Interoperable and Service-oriented Web Geoprocessing Framework for Carbon Sources and Sinks Analysis <u>Huaqiao Xing</u>, Songnian Li</p>	<p>Oral 23: Geospatial Methods IV Location: ENG105 Chair: Prof. Zhenlong Li, Penn State</p> <p>Autonomous GIS: the next-generation AI-powered GIS <u>Zhenlong Li</u>, Huan Ning</p>	<p>Oral 24: Disaster and Resource Management Location: ENG106 Chair: Dr. Daoye Zhu, University of Toronto</p> <p>Generating Geographic Location Description of Earth's Surface Anomaly with Natural Language Based on Remote Sensing Data Products</p>

	<p><u>Xi Gong</u>, Shuyang Peng, Yujian Lu, Shaohua Wang, Xiao Huang, Xinyue Ye</p> <p>Deep Learning-based Multi-dimensional Twitter Data Analysis for Traffic Event Detection <u>Danya Qutaishat</u>, Songnian Li</p> <p>Towards Real-time Discovery Of Disaster Causal Diagrams Using Social Network Text Data <u>Xuanyan Dong</u>, Erick Mas, Bruno Adriano, Shunichi Koshimura</p> <p>Sleepless Cities under Social Isolation: Geographically and Temporally Revealing Circadian Rhythm Disorders through Social Media <u>Lei Zou</u>, Mingzheng Yang, Wanhe Li</p> <p>Trajectory and Hotspot Analysis of Hate Speech on Social Media using Machine Learning and Geo-spatial Technologies Areeba Waseem, <u>Muhammad Shahzad Sarfraz</u>, Francis Palma</p>	<p>CASA Carbon Data and Knowledge Platform for Carbon Emission Mitigation <u>Jing Zhao</u>, Guoqing Li, Tuo Wang, Long Zhao, Jian Wang</p> <p>High Spatio-Temporal Resolution Estimation of XCO2 Observations using Spatial Feature Fusion <u>Hui Yang</u>, Liu Cui, Zhaojin Yan, Gefei Feng</p> <p>Global Continuous Atmospheric Carbon Dioxide Mapping (GCXCO2) with a High Spatiotemporal Resolution from 2000 to 2020 Zhihao Sun, <u>Xiaobin Guan</u>, Chao Zeng, Huanfeng Shen</p> <p>Construction Of Forest Carbon Stock Estimation Model Based On Multimodal Remote Sensing Data <u>Wankun Min</u>, Wenli Huang, Yumin Chen</p>	<p>Case-based Intelligent Geographical Modeling – Reasoning Strategies and Remaining Research Issues <u>Cheng-Zhi Qin</u>, Yijie Wang, A-Xing Zhu</p> <p>Methods for Quantum Machine Learning and Its Applications <u>TianXiang Yue</u></p> <p>Sentiment Analysis Based on Geo-tagged Text <u>Daijiang Wang</u>, Min Chen, Yongning Wen</p> <p>Geographic Proximity and Homophily Effects Drive Social Interactions Within VGI Communities: an Example of iNaturalist <u>Guiming Zhang</u>, Xi Gong, Di Zhu</p> <p>Anomaly Detection of Crowd Flow by Using Ensemble Generative Adversarial Networks Yong-Ti Wang, <u>Chun-Lei Lee</u>, Yi-Chung Chen</p>	<p><u>Fengji Zhang</u>, Yi Long, Ling Zhang</p> <p>Enhanced Early Warning Text Generation for Efficient Disaster Information Delivery based on Expression-adapted Knowledge Graph <u>Yue Wu</u>, Ling Zhang, Yi Long</p> <p>Hebei Key Laboratory of Resource and Environmental Disaster Mechanism and Risk Monitoring Liu Dongpo, <u>Wang Yanping</u>, Qiao Wensi, Sun Yucheng</p> <p>A Real-Time Video Geolocation Method for Projecting GIS Data into Surveillance Video to Monitor Natural Resources <u>Zhizheng Zhang</u>, Zhenfeng Shao, Xin Shao</p> <p>Unveiling Disparate Community Adaptations to Heat Extremes Using Mobile Phone Location Data <u>Heng Cai</u>, Hao Tian</p>
12:30pm - 1:30pm	<p>Lunch Location: ENG Hallway</p>			
1:30pm - 3:00pm	<p>Oral 25: Disaster Mapping & Assessment Location: ENG101 Chair: Prof. Yongmei Lu, Geography and Environmental Studies</p> <p>Urban Road Collapse Risk Assessment Study Based on InSAR Spatiotemporal Data Juncai Jiang, Wenfeng Bai, Yizhao Wang, <u>Fei Wang</u>, Qinglun He, Long Chen, Yuming Qiao, Zhi Wang, Haitao Luo</p>	<p>Oral 26: Interdisciplinary IV Location: ENG102 Chair: Dr. Temitope Seun Oluwadare, Queens University, Kingston</p> <p>Main Outcomes of GIS and Remote Sensing Applications for Marine Environment and Resources in Vietnam <u>Lan Tran Dinh</u>, Thao Nguyen Van, Huong Do Thi Thu</p>	<p>Oral 27: Geospatial Methods V Location: ENG105 Chair: Prof. A-Xing Zhu, Nanjing Normal University</p> <p>Overview And Prospect Of Visibility Analysis Approaches <u>Jianghong Zhao</u>, <u>Ailin Xu</u>, Xueqing Zhang, Yunhui Zhang, Yihong Zhang, Mengtian Cao, Ming Huang</p>	<p>Oral 28: Trajectory & Mobility Location: ENG106 Chair: Dr. Xintao Liu, The Hong Kong Polytechnic University</p> <p>A Flexible Detection Method of Periodic Activities in Trajectory Data - A Case of Beijing Using Mobile Phone Signalling Data <u>Zidong Fang</u>, Tao Pei, Ci Song, Xiaorui Yan, Le Liu</p>

	<p>Urban Flood Risk Assessment and Evacuation Planning: A Two-layer Planning Approach for Sustainable High-Density Cities <u>Xinyue Gu</u>, Yan Mao, Xintao Liu</p>	<p>Synthetic Aperture RADAR (SAR) Bathymetry Inversion using Swell Waves in Eastern Florida Coastal Waters Sanduni Disanayaka Mudiyansele, <u>Amr Abd-Elrahman</u>, Benjamin Wilkinson</p>	<p>Quantification of Prediction Uncertainty Based on Third Law of Geography <u>A-Xing Zhu</u></p>	<p>Exploration of Human Activity Fragmentation in Cyber and Physical Spaces Using Massive Mobile Phone Data Minglei Liao, <u>Xintao Liu</u></p>
	<p>A Landslide Susceptibility Mapping Method Based on GIS and Data Enhancement Techniques: A Case Study of Guangzhou City, China Long Chen, Yizhao Wang, Wenfeng Bai, <u>Fei Wang</u>, Shiyang Xu, Zhi Wang, Qinglun He, Juncai Jiang, Yuming Qiao</p>	<p>Video GIS System For Arable Land Resources Surveillance <u>Boshen Chang</u>, Qimin Cheng, Xin Shao</p>	<p>The Application of CycleGAN Combined with Human Visual Perception in Real-Time Generalization <u>Haoxuan Chen</u>, Ling Zhang, Yi Long</p>	<p>Unveiling the Inequalities in Exposure, Impacts and Adaptation to Heat Waves through Human Mobility Data Cong Ma, <u>Yi Qiang</u></p>
	<p>A Methodology For Predicting The Subsidence Trend of Ground Collapse Under The Water Flow Qinglun He, Yizhao Wang, Wenfeng Bai, <u>Fei Wang</u>, Xing Min, Zhi Wang, Long Chen, Juncai Jiang, Yumin Qiao</p>	<p>Filling Snow-covered pixels in Sentinel-2 Satellite Imagery: A Generative Adversarial Network (GAN) approach <u>Temitope Seun Oluwadare</u>, Dongmei Chen, Olawale Oluwafemi, Masoud Babadi, Mohammad Hossain</p>	<p>Spatio-temporal Prediction Learned Index <u>Feng Zhang</u></p>	<p>Understanding the Inequality of COVID-19 on Mobility Patterns in the Greater Toronto Area: Implications for Public Health Policy and Practice <u>Jingheng Yan</u>, Dongmei Chen, Lu Wang, Lixia Yang, Jie Yu</p>
	<p>A Spatial Correlation-Based Slope Stability Assessment Method For Mountain Areas With Limited Landslides Data <u>Rui Yuan</u>, Weixi Wang</p>	<p>Estimating Rainfall Intensity from Surveillance Audio <u>Meizhen Wang</u>, Yuxuan Guo, Mingzheng Chen, Ziran Wang</p>	<p>Is the Generative Method a Solution for Real-time Map Generalization? <u>Ling Zhang</u>, Haoxuan Chen, Yi Long</p>	<p>Dynamic Evacuation Shelter Allocation in Response to Human Mobility: A Taipei City Case Study <u>Chang-Hung Shih</u>, Cheng-Yun Wu, Shu-Ping Tseng, Yi-Lin Huang, Rong-Pu Jhuang, Yi-Chung Chen, Tien-Yi Yang, Wei-Ting Chen</p>
3:00pm - 3:30pm	<p>Coffee/Tea Break Location: ENG Hallway</p>			
3:30pm - 5:00pm	<p>Closing Session Location: ENG103 Time: Wednesday, August 14: 9:30am - 10:30am Location: Speaker:</p>			