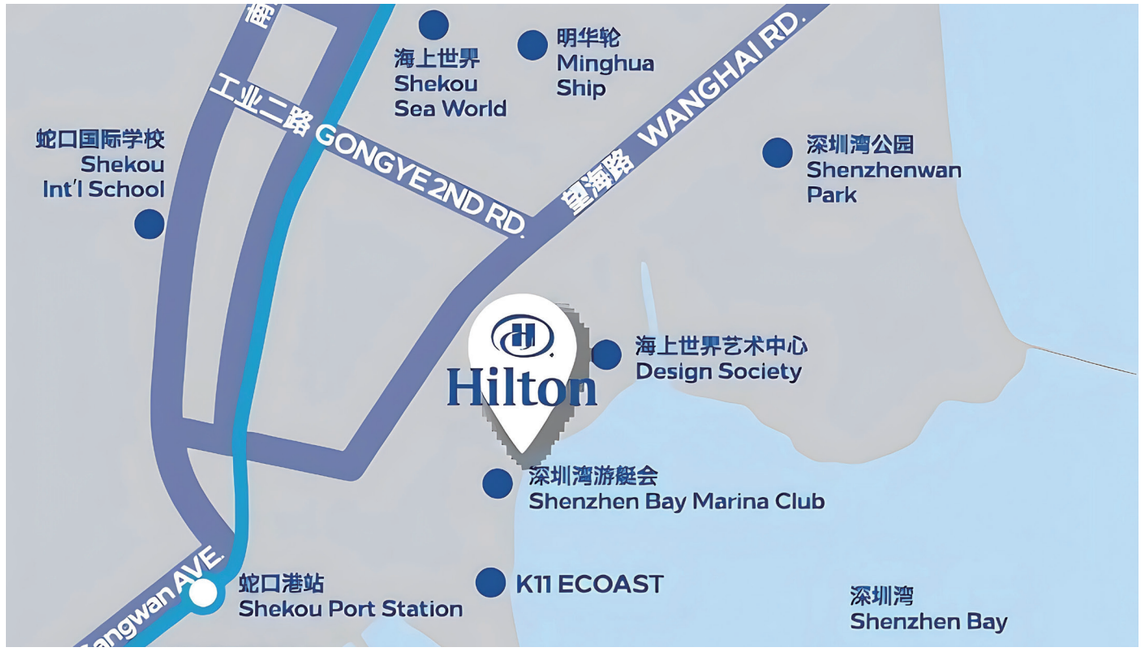
ICSOC 2025

The 23rd International Conference on Service-Oriented Computing

Handbook

December 1-4,2025
Shenzhen, China

Map



Conference Venue

ICSOC 2025 will be held in Shenzhen, China. The main conference and co-located events (workshops, tutorials, etc.) will be held at the **Hilton Shenzhen Shekou Nanhai.**

Address: 1177 Wanghai Rd, Nanshan District, Shenzhen, 518067, China

Distance from Airports:

Shenzhen Bao'an International Airport → Hotel: 31.4km

Hong Kong International Airport → Hotel: 40km

Weather Forecast

Dec 1, 2025	Dec 2, 2025	Dec 3, 2025	Dec 4, 2025
Cloudy	Cloudy	Cloudy	Cloudy
15 ~ 23 ℃	18 ~ 24 ℃	20 ~ 24 ℃	19 ~ 25 ℃

ICSOC 2025

The 23rd International Conference on Service-Oriented Computing

OVERVIEW

ICSOC, the International Conference on Service-Oriented Computing, is the premier international forum for academics, industry researchers, developers, and practitioners to report and share groundbreaking work in service-oriented computing. ICSOC fosters cross-community scientific excellence by gathering experts from various disciplines, such as services science, data science, management science, business-process management, distributed systems, wireless and mobile computing, cloud and edge computing, cyber-physical systems, Internet-of-Things (IoT), scientific workflows, artificial intelligence, machine learning, and services and software engineering.

ICSOC provides a high-quality forum for presenting results and discussing ideas that further our knowledge and understanding of the various aspects (e.g. application and system aspects) related to Service Computing with particular focus on artificial intelligence, machine learning, big data analytics, IoT, and emerging technologies including quantum computing.

The 23rd edition of the ICSOC conference series will be hosted by the Research Center of Intelligent Computing for Enterprises and Services (ICES), Faculty of Computing, Harbin Institute of Technology, from December 1st to December 4th, 2025.

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Artifact Evaluation Committee Members

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Program Overview

Time	Theme			
November 30, 2025 (Sunday)				
14:00-20:00	Registration			Hilton Lobby
Day 1: December 1, 2025 (Monday)				
	Registration			Hilton Lobby
	China Merchants Hall 1	China Merchants Hall 2	China Merchants Hall 3	China Merchants Hall 4
09:00-10:30	AI-PA Workshop	SQS Workshop - Part I	PhD Symposium	
10:30-11:00	Coffee Break			
11:00-12:30	REMS Workshop	SQS Workshop - Part II	Symposium on Generative AI and Services	
12:30-14:00	Buffet Lunch（Open Buffet Restaurant）			
14:00-15:30	SICI Workshop - Part I	SOC4AI Workshop	ASOCA Workshop	Demos - Part I
15:30-16:00	Coffee Break			
16:00-17:30	SICI Workshop - Part II	DCAI4AI Workshop	SOCAISA Workshop	Demos - Part II
18:30-20:00	Welcome Reception（Eden Garden Rooftop Bar）			
Day 2: December 2, 2025 (Tuesday)				
	Registration			Hilton Lobby
	China Merchants Hall 1	China Merchants Hall 2	China Merchants Hall 3	China Merchants Hall 4
09:00-09:30	Opening			
09:30-10:30	Keynote A			
10:30-11:00	Coffee Break			
11:00-12:30	Session S1 Service Foundations I	Session S2 Service Recommendation and Selection I	Session S3 Microservice Architectures - Microservices Testing	Session S4 Services at the Edge I
12:30-14:00	Buffet Lunch（Open Buffet Restaurant）			
14:00-15:30	Session S5 Service Foundations II and Service Generation	Session S6 Future Services Technology	Session S7 Business Processes I	Symposium on AI for Service Engineering Education
15:30-16:00	Coffee Break			
16:00-17:30	Session S8 Service Recommendation and Selection II	Session S9 Serverless	Session S10 Services at the Edge II	
17:30-19:00	Tutorial A	Tutorial B	Tutorial C	Buffet Dinner (Open Buffet Restaurant)

Program Overview

Time	Theme			
Day 3: December 3, 2025 (Wednesday)				
	Registration			Hilton Lobby
	China Merchants Hall 1	China Merchants Hall 2	China Merchants Hall 3	China Merchants Hall 4
09:00-10:00	Keynote B			
10:00-10:30	Coffee Break			
10:30-12:00	Panel			
12: 00-14:00	Buffet Lunch（Open Buffet Restaurant）			
14:00-17:30	Sightseeing	Route 1: Experience HarmonyOS Intelligent Technology Route 2: SF Express Low-Altitude Smart Logistics Tour Route 3: Nantou Ancient City & Mangrove Coastal Ecological Park		
17:30-19:00	Banquet Chun Manyuan Auspicious Hall 4th Floor, Sea World Culture and Art Center (Nanshan District, Shenzhen)			
Day 4: December 4, 2025 (Thursday)				
	Registration			Hilton Lobby
	China Merchants Hall 1	China Merchants Hall 2	China Merchants Hall 3	China Merchants Hall 4
09:00-10:00	Keynote C			
10:00-10:30	Coffee Break			
10:30-12:00	Session S11 Services at the Edge III	Session S12 Software as a Service and Cloud Infrastructure II - Data Centers	Session S13 Business Processes II	Session S14 Software as a Service and Cloud Infrastructure I - QoS in the Cloud
12:00-14:00	Buffet Lunch（Open Buffet Restaurant）			
14:00-15:30	Session S15 Microservice Architectures - Microservices Design	Session S16 Software as a Service and Cloud Infrastructure III - Pricing	Session S17 Business Processes III	Session S18 Privacy, Security and Trust
15:30-16:00	Closing			

Keynote A

December 2, Tuesday 09:30-10:30 China Merchants Hall

CHAIR

Boualem Benatallah, Dublin City University

SPEAKER

Understanding the Behavior and Quality of AI Services: Obvious Things that Need to Be Said

Dr. Fabio Casati
ServiceNow & University of Trento

ABSTRACT

AI-powered services, representative of 'Software 3.0', follow a development paradigm where progress is measured by quality improvement rather than new features. This creates a core dependency on an 'iterate-evaluate-improve' loop analogous to training AI models. Consequently, the accuracy of the evaluation process is the cornerstone of the entire system: precise evaluations drive effective improvement, while noisy evaluations severely hinder progress. A central challenge, however, is that while evaluation is foundational and AI simplifies development, building a reliable evaluation process is exceptionally difficult. This difficulty is often underestimated by teams lacking an AI-first culture. This talk will illuminate the brittleness of evaluation in AI services and explore how to strengthen it—primarily by correctly defining the problems we aim to solve—to accelerate service improvement. The presentation will not introduce novel knowledge but will instead synthesize established concepts to provide a clear framework for building more reliable evaluation processes.

BIO

Dr. Fabio Casati is Professor at the University of Trento. Fabio focuses on designing, architecting and deploying AI-powered workflows for enterprise customers. On the research side, he is working on evaluations and governance of AI systems and on AI systems that serve needs of individuals and subjective point of views.

Keynote B December 3, Wednesday 09:00-10:00 China Merchants Hall

CHAIR

Shuiguang Deng, Zhejiang University

SPEAKER

Research and development practice of Huawei Celia Agent and HarmonyOS Agent Framework

Dr. Yi Xie
Huawei

ABSTRACT

At a time when AI technology is revolutionizing the paradigm of human-device interaction, the HarmonyOS Intelligent Agent, implemented in Huawei's HarmonyOS 6.0, is driving a transition in operating systems from 'passively responding to commands' to 'actively understanding and making decisions.' This presentation will focus on this core technology, introducing the HarmonyOS Intelligent Agent Framework (HMAF) and related technologies and scenarios of Huawei's Xiaoyi, while exploring how Agents are reshaping device experience and ecosystem dynamics.

BIO

Yi Xie, Ph.D. in Engineering from Zhejiang University, was a visiting scholar at McGill University. He currently serves as the Head of AI Agent R&D at Huawei Consumer Business Group, leading the technology and product development related to Xiaoyi and HarmonyOS Intelligent Agents. With over 30 filed patents in artificial intelligence, his collaborative research has been published at top-tier AI conferences such as AAAI and NeurIPS. He has spearheaded the development of key HarmonyOS capabilities including the Xiaoyi Agent Platform and Xiaoyi Memory. He also led the authorship of the 'HarmonyOS Intelligent Agent Framework White Paper,' which was publicly released at Huawei HDC 2025.

Keynote C December 4, Thursday 09:00-10:00 China Merchants Hall

CHAIR

Liang Zhang, Fudan University

SPEAKER

Trustworthy Services: From Trustworthy Blockchains to Trustworthy LLMs

Dr. Zibin Zheng
Sun Yat-sen University

ABSTRACT

In recent years, digital services such as blockchain-as-a-service and AI-as-a-service have advanced rapidly. However, digital services also entail trustworthiness risks, and ensuring the trustworthiness of digital services has become an urgent issue. This talk will present the trustworthiness challenges of blockchain services and LLM (Large Language Model) services across multiple dimensions, and then introduce related technical research and industry enablement case studies from the School of Software Engineering, Sun Yat-sen University.

BIO

Dr. Zibin Zheng is the Dean of the School of Software Engineering, and the Vice Dean of the Artificial Intelligence Institute at Sun Yat-sen University. He is an IEEE Fellow, an IET Fellow, and an ACM Distinguished Scientist. He also serves as the Deputy Director of the National Digital Home Engineering Technology Research Center and the Director of the Guangdong Provincial Blockchain Engineering Technology Research Center. His research interests include service computing, trustworthy large language models, blockchain, and software reliability. According to Google Scholar, his publications have received over 50,000 citations, with an H-index of 100. His honors include the Second Prize of Natural Science Award from the Ministry of Education, the Second Prize of Wenjun Wu AI Natural Science Award, and the ACM SIGSOFT Distinguished Paper Award.

Day 1: December 1, 2025 (Monday)

AI-PA Workshop

December 1, Monday 09:00-10:30 China Merchants Hall 1

Chair ***Boualem Benatallah,*** *DCU, Dublin, Ireland*

Improving Business Process Efficiency with Deep Reinforcement Learning and Variant-based Simulation
Michał Ostapowicz, Kamil Żbikowski, Piotr Gawrysiak and Mahsa Pourbafrani

Don’ t Get Prompted: A Lightweight Modular Pipeline for Detecting and Mitigating Prompt Injection in LLMs
Sogol Hosseini, Saleh Afzoon, Kamyar Taeb, Mohammadhossein Ahmadi and Ali Mohseni

OptiFlow: Validator-Gated Agentic Optimization of Analytics Pipelines
Hirad Rezaei and Fethi Rabhi

Mining Operational Patterns in Logistics: A Case Study for Package Handling System
Tsung-Hao Huang, Marco Pegoraro, Gyunam Park, Sean Lau, Morgan Hiew, Yan Nei Law, Benny Drescher and Wil van der Aalst

Fair and Accurate University Admission Prediction in the UAE with Interpretable Machine Learning
Mohammad Abbadi, Yassine Himeur, Dahlia Mansoor, Shadi Atalla and Wathiq Mansoor

PhD Symposium

December 1, Monday 09:00-10:30 China Merchants Hall 3

Chair ***Cesare Pautasso,*** *USI Lugano, Switzerland*

Scalable IoV Forensics on DAG-Based Blockchain: Modeling, Security, and Latency Evaluation
Jiasi Li and Xuefeng Piao

Towards Agile Architectural Streaming Data Pipeline
Yu Su

An Event Storming-Based Automated Modeling Method and Multi-Agent Architecture
Haoran Shi, Shijun Liu and Li Pan

SQS Workshop

December 1, Monday 09:00-12:30 China Merchants Hall 2

Chair ***Jose Garcia-Alonso,*** *University of Extremadura, Spain*

Keynote talk

State of the Art in Quantum Software Engineering and Optimization
Prof. Tao Yue, Beihang University, China

Quantum Circuit Equivalence Checking: A Tractable Bridge From Unitary to Hybrid Circuits
Jérome Ricciardi, Sébastien Bardin, Christophe Chareton and Benoît Valiron

A Circuit Mirroring Approach to Selecting the Best Quantum Computer
Alessandro Bocci, Giuseppe Bisicchia, Jose Garcia-Alonso and Antonio Brogi

QEF: Reproducible and Exploratory Quantum Software Experiments
Vincent Gierisch and Wolfgang Mauerer

The Advantage Boundary: A Formal Basis for Integrating Quantum and Classical Services in Hybrid SaaS
Jose Antonio Parejo and Antonio Ruiz-Cortés

Estimating the number of shots to improve results accuracy
Elena Desdentado, Macario Polo and Coral Calero

REMS Workshop

December 1, Monday 11:00-12:30 China Merchants Hall 1

Chair ***Guanjie Cheng,*** *Zhejiang University, China*

A Privacy-Preserving Insurance Compensation via Decentralized Identifier
Chen Xiao, Liu Yang, Yin Zihang and Cao Sheng

PSNM: Enabling Structured, Reusable, and Adaptive Product-Service Network Modeling for Complex Service Systems
Meng Xi, Zhiqi Cao, Hao Guan, Yechen Jin, Ying Li, Tong Qin, Shijing Shen and Xiaohua Pan

Reliable and Privacy-preserving Multi-dimensional Data Aggregation for Agent-based Smart Services
Leilei Zhang, Guanjie Cheng, Taolong Su, Xinkui Zhao, Yongheng Shang, Feiyi Chen and Shawn Shi

DCLLM: An Efficient and Interpretable Data Cleaning System with Large Language Models
Yangyang Wu, Chen Yang, Guanjie Cheng, Mengying Zhu, Xinkui Zhao, Shuiguang Deng, Xiaoye Miao, Xiuqi Weng, Shawn Shi and Jianwei Yin

Cut to the Code: A Pruned Dependency Graph-Based Multi-Level Feature Fusion Approach for Vulnerability Detection
Peng He, Zhihao Yi, Chunying Zhou, Qun Zhang and Mengyao Chen

Symposium on Generative AI and Services

December 1, Monday 11:00-12:30 China Merchants Hall 3

Chair ***Michael Sheng,*** *Macquarie University, Sydney, Australia*
Yingjie Wang, *Yantai University, China*

Introduction

For more than two decades, service computing has been a key technical driver for revolutionizing the modern Web-based software industry, which has brought profound economic and societal transformations. The recent advance in artificial intelligence, in particular generative artificial intelligence (GenAI) and large models, provides an exciting paradigm shift in service computing. For instance, with large language models (LLMs), it is now possible to automate service composition, in both front end (e.g., service goals and service composition definition) and back end (e.g., service selection, service orchestration, and service deployment), using natural language prompts and LLM agents. While GenAI and LLMs provide unprecedented opportunities in service computing, there remain many open challenges due to several significant issues of these technologies such as non-transparent and opaque nature of LLMs, training data dependencies, and most seriously, hallucinations (e.g., non-existent services). This symposium aims to provide a platform for researchers and industry practitioners to share recent advancements and to exchange views on addressing these challenges.

PromptGuard: A Novel Prompt Sanitization Approach for Large Language Model Services
Junchang Jing, Shuaiyang Zhao, Dong Liu and Zhiyong Zhang

MPG-VLA: Efficient Trajectory Generation for Articulated Objects
Feiyang Huang, Ruihan Hu, Xinrui Cheng, Junkang Quan and Zhongjie Wang

Natural Language Processing for generative question-answering of code fragments in selected programming languages
Aneta Poniszewska-Maranda

MCP4PM: A Model Context Protocol Framework for Accessible Process Mining Analytics
Michał Ostapowicz, Tomasz Romanowski, Kamil Żbikowski and Piotr Gawrysiak

SICI Workshop - Part I

December 1, Monday 14:00-15:30 China Merchants Hall 1

Chair *Mingyi Liu*

Driving Operational Intelligence: An Adaptable Information Extraction Framework for User-Centric Services
Shuyang Nie, Fan Li and Kun Liu

Hierarchical Data Fusion Method for Link Uncertainty in Multiplex Networked Industrial Chains
Tian-Yu Zuo, Xianghui Hu, Kai Di, Yichuan Jiang, Pan Li and Bai Li

Energy-Aware Workload Allocation in Industrial Edge-Cloud Computing
Ziqi Wang, Yurun Chen, Yuhao Yang, Daojiang Hu, Zhenkun Wang, Congcong Mu, Shengye Pang, Guanjie Cheng, Xinkui Zhao and Hailiang Zhao

MVSRA: Mobility-Aware and Cost-Optimized Federated Learning for Service-Oriented Industrial Vehicle Network
Jiahui Zhai, Ziqi Wang, Zhiwei Ling, Shenzhi Yang, Zhanghan Zheng, Zhenkun Wang, Yujing Xue, Hui Zhao, Shengye Pang, Guanjie Cheng, Xinkui Zhao and Hailiang Zhao

A Bidirectional Attention-Based Method for Anomaly-Aware Missing Data Imputation in Power Systems
Zhenkun Wang, Jingyu Fan, Congcong Mu, Yujing Xue, Pengsheng Liu, Wenzhuo Qian, Ziqi Wang, Guanjie Cheng and Hailiang Zhao

SICI Workshop - Part II

December 1, Monday 16:00-17:30 China Merchants Hall 1

Chair ***Hailiang Zhao,*** *Zhejiang University, China*

Energy-Aware Deployment of Multi-Exit DNNs in Industrial Intelligence
Teng Wang, Xiang He, Jingyu Fan, Congcong Mu, Pengsheng Liu and Zhongjie Wang

FairMoE: A Load-Balanced Mixture-of-Experts Collaboration Framework for Short-Term Electricity Load Forecasting
Guoshu Lai, Xiangpeng Zhan, Xiaorui Qian, Ying Qu, Lingling Zhu, Kai Xiao and Yuying Chen

SupplyChainAgent: LLM-Driven Multi-Agent Simulation of Complex Supply Chains
Xujun Huang, Xinzhe Shen, Jianfan Chen, Qizhe Xu, Yin Chen, Yufeng Zhang, Mingyi Liu and Zhongjie Wang

Unified Resource Coordination in Hybrid Computing Architectures
Shaoqing Liu, Longqing Fan, Xingzhao Cao, Jiahui Zhai, Ziqi Wang, Xinkui Zhao and Hailiang Zhao

Service-Oriented Agent Safety in Industry: A Workflow-Centric Benchmark
Zhichao Liu, Wenbo Pan, Yinggang Sun, Haining Yu, Yizheng Yang and Haoding Zhang

SOC4AI Workshop

December 1, Monday 14:00-15:30 China Merchants Hall 2

Chair ***José Antonio Parejo Maestre and José María García,*** *Univ. Sevilla, Spain*

An LLM-Based Approach to Generating Authorization Policies for Data Products
Valeria Maria Fortina and Pierluigi Plebani

Enhancing Microservice Observability Through AI Agents in Decentralized Telemetry
Manuel Otero Barbasán, Javier Fernández-Castillo, José María García and Pablo Fernandez

Guided Reasoning Chains for API Recommendation
Kenji Matsumoto and Yohei Murakami

PROV-MLXOps: Towards Provenance-Based Machine Learning and Explainability Operations
Jun Huang and Yan Liu

Active Inference-Based Adaptive Routing for Heterogeneous Edge AI Services
Zihang Wang, Boris Sedlak and Schahram Dustdar

ASOCA Workshop

December 1, Monday 14:00-15:30 China Merchants Hall 3

Chair ***Massimo Mecella,*** *Sapienza Università di Roma, Italy*

On the feasibility of identifying microservice early-stage architectures using LLMs
Marco Calamo, Francesco Leotta, Flavia Monti, Massimo Mecella and Fabio Spaziani

Automated workload scheduling in constrained service-based environments
Jacopo Rossi, Flavia Monti, Massimo Mecella, Manuel Resinas and Antonio Ruiz-Cortés

Microservice Architectures for Real-Time Aerospace Applications: a Feasibility Study
Jacopo Rossi, Georgi Todorov Dimitrov, Flavia Monti, Francesco Leotta and Massimo Mecella

DCAI4AI Workshop

December 1, Monday 16:00-17:30 China Merchants Hall 2

Chair ***Yacine Sam,*** *University of Tours, France*

Alloy-Driven Verification of Object-Centric Event Data: From Temporal Logic to Knowledge Graphs
Saba Latif, Huma Latif, Muhammad Rameez Ur Rahman, Saba Latif and Touseef Ur Rehman

A Text-to-HiveQL Prompt Engineering Approach for Smart Farming applications
Sandro Bimonte, Boualem Benatallah, Jean-Christophe Roux and Mohamed El-Ouati

Dynamic Search Query Refinement using LLMs for Systematic Literature Review
Sneha Krishnan Akavalapil, Ruchika Jha, Vitor Gaboardi dos Santos and Boualem Benatallah

SOCAISA Workshop

December 1, Monday 16:00-17:30 China Merchants Hall 3

Chair ***Said Tazi,*** *LAAS-CNRS, Toulouse, France*

Experimenting Agentic–AI Tools for SOC Smart Applications
Lara Sormani, Giuseppe Vizzari and Flavio Maria De Paoli

A Service-Oriented Knowledge-Graph Framework for Transparent and Adaptable ESG Reporting
Mingqin Yu and Fethi Rabhi

A Multi-Specialty AI Hospital in Your Pocket: Agentic Small Language Models for Edge-Based Clinical Decision Support
Filippo Bianchini, Matteo Marinacci, Edoardo Bianchini, Nicolas Vuillerme, Cyril Wyon-Boyault, Mathilde Proponnet-Guerault and Eric Folco

Task-Aware Sensor Compression for Irrigation Decision Support in LoRaWAN Smart Farming
Mohammed Flissat and Mohammed Elaroussi

Demos and Resources

December 1, Monday 14:00-17:30 China Merchants Hall 4

Chair ***Carlos Canal,*** *University of Malaga, Spain*
Jian Wang, *Wuhan University, China*

Yao Wang, Jiahao Wang, Zhongxiao Wang, Yibo Liu, Jiayi Wang, Haoxin Liu, Yueshen Xu, Tingting Liang and Rui Li
InferOps: An Integrated Operations Platform for Efficient LLM Inference Service in Cloud

Francesco Vinci, Gyunam Park, Wil van der Aalst and Massimiliano de Leoni
ProSiT: A Tool for Interactive and Transparent Process Simulations

Alejandro García-Fernández, Jose Antonio Parejo and Antonio Ruiz-Cortés
From Pricing Models to Runtime Self-Adaptation: A Demonstration of SPACE

Ruipeng Han, Xiao Wang, Junjie Huang, Changheng Xie, Hanchuan Xu, Zhongjie Wang and Xiaofei Xu
The LLM-based Metaverse Services for English Tutoring with Virtual-Physical Multimodal Fusion

Yongchao Xing, Weipan Yang, Yiming Lv, Dianhui Chu and Zhiying Tu
SmellDoc: Extending Elastic Stack for Microservice Smell Detection and Visualization

Manuel Otero Barbasán, Javier Fernández-Castillo, José María García and Pablo Fernandez
Towards Conversational Observability: Extending Telemetry-Framework with AI Agents

Day 2: December 2, 2025 (Tuesday)

——Session **S1**——

Service Foundations I

December 2, Tuesday 11:00-12:30 China Merchants Hall 1

Chair ***Ilche Georgievski,*** *University of Stuttgart*

From Natural Language to TOSCA: Leveraging LLMs for Automated Service Composition

Wided Meflah, Hayet Brabra, Mehdi Acheli, Hosni Ben Douma, Mohamed Sellami, Walid Gaaloul and Djamal Zeghlache

RESTful API Service Discovery via Comprehensive Feature Mining, Deep Neural Networks, and Contrastive Learning

Yueshen Xu, Gairui Bai, Weihao Xiao, Xinkui Zhao, Yuyu Yin, Rui Li and Fanhao Zeng

DHG-LLM: A Dual-Channel Heuristic Greedy Framework for End-to-End Service Solution Construction under LLM Guidance

Ying Sun, Xiao Wang, Hanchuan Xu and Zhongjie Wang

——Session **S2**——

Service Recommendation and Selection I

December 2, Tuesday 11:00-12:30 China Merchants Hall 2

Chair ***Guanjie Cheng,*** *School of Software Technology, Zhejiang University*

Optimal Subset Oracle-based Web API Composition Recommendation for Mashup Creation

Chao Yan, Qinghe Yan, Jiahui Dong, Boyuan Yan, Lianyong Qi and Weiyi Zhong

TSSGCF: Textual Similarity-Supervised Graph Collaborative Filtering for Web API Recommendation

Jiayu Li, Xinci Qiu, Guosheng Kang, Yan Li and Jianxun Liu

Dynamic Reputation Measurement of Online Services for Maximizing User Group Satisfaction

Hedan Zheng, Xiaodong Fu, Zhizhong Liu, Li Liu, Jiaman Ding and Lianyin Jia

——Session **S3**——

Microservice Architectures - Microservices Testing

December 2, Tuesday 11:00-12:30 China Merchants Hall 3

Chair ***Zhicheng Cai,*** *Nanjing University of Science and Technology*

GRACE: A Strategic LLM-Enhanced Graph Reinforcement Learning Framework for Adaptive Fault Recovery in Microservice Systems
Ruibo Chen, Yanjun Pu, Ji Xin, Junle Wang, Xingchuang Liao, Kui Zhang and Wenjun Wu

Adaptive Modality Compensation via Bi-Mamba Dual-Stream Learning for Microservice Failure Diagnosis under Incomplete Multimodal Data
Kaiqi Ding, Yuanmu Ma and Kaigui Bian

Failure Classification for Microservice Systems Based on Variational Graph Auto-Encoders
Wu Sun, Panfeng Chen, Mei Chen, Hui Li, Yanhao Wang, Gang Huang and Hongyuan Li

——Session **S4**——

Services at the Edge I

December 2, Tuesday 11:00-12:30 China Merchants Hall 4

Chair ***Sami Yangui,*** *LAAS-CNRS*

Service-Oriented AI Model Compression for Computing Continuum Environments
Adriano Puglisi, Flavia Monti, Christian Napoli and Massimo Mecella

Optimizing Containerized Edge Service Migration through File-Level Storage Sharing
Jiangwei Li, Zhangbing Zhou, Sami Yangui, Deng Zhao, Ruixi Pan and Walid Gaaloul

Anticipatory Service Migration in Mobile Edge Computing via Spatio-Behavioral Prediction
Mengxuan Dai, Yuyin Ma, Yunni Xia, Yumin Dong, Yong Ma and Yujia Song

LEADR: A Lyapunov-based Energy-Aware Decentralized Routing Strategy for Continuous UAV Communication Services
Yifan Li, Xiang He, Haomai Shi and Zhongjie Wang

——Session **S5**——

Service Foundations II and Service Generation

December 2, Tuesday 14:00-15:30 China Merchants Hall 1

Chair ***Massimo Mecella,*** *University of Rome La Sapienza*

GCLP: Generative Contrastive Learning with Adaptive Prompt-Guided Diffusion for Temporal Reasoning over Service Knowledge Graphs
Yukun Cao, Lisheng Wang, Yunfeng Li, Zhihao Guo, Xuefeng Xu, Luobin Huang and Zirui Xu

MCPybarra: A Multi-Agent Framework for Low-Cost, High-Quality MCP Service Generation
Bocheng Peng, Mingyi Liu, Yanguang Liu, Congcong Tian, Shuang Yu and Zhongjie Wang

Automating Policy-as-code Generation Pipeline for Data Products: an OpenAPI-driven Rego generator
Matteo Brambilla, Matteo Falconi, Valeria Maria Fortina, Pierluigi Plebani and Monica Vitali

——Session **S6**——

Future Services Technology

December 2, Tuesday 14:00-15:30 China Merchants Hall 2

Chair ***Ting Cai,*** *Hubei University of Technology*

A Non-Intrusive Framework for Deferred Integration of Cloud Patterns in Energy-Efficient Data-Sharing Pipelines
Sepideh Masoudi, Mark Edward Michael Daly, Jannis Kiesel and Stefan Tai

AI-Driven Resource Optimization of Quantum Service Computing
Javier Romero-Alvarez, Jaime Alvarado-Valiente, Antonio Jesus Sanchez-Gil, Enrique Moguel and Jose Garcia-Alonso

DeepQUBO: Quantum-Optimized Route Planning for Carpooling with Precedence-Constrained GTSP
Zifeng Liu, Yuzhuo Zhao, Xiaofeng Gao and Kun Tian

IoT and LLM Supported Digital Twin Platform: A Case Study on a Net Zero Oriented Building
Jiaqi Li, Xingchen Hu and Jun Shen

——Session **S7**——

Business Processes I

December 2, Tuesday 14:00-15:30 China Merchants Hall 3

Chair ***Juan Manuel Murillo,*** *University of Extremadura*

A Multi-view Heterogeneous Hypergraph Augmented Self-Gating Contrastive Fusion Framework for Service Recommendation
Fenfang Xie, Runjun Zhang, Caijie Lin, Liang Chen and Mingdong Tang

Reliable and Configurable Process Simulations via Probabilistic White-Box Models
Francesco Vinci, Gyunam Park, Wil van der Aalst and Massimiliano de Leoni

MALL: A Mamba-Based Autoencoder Enhanced by an LLM for Multi-Perspective Business Process Anomaly Detection
Zhihao Pei and Guiling Li

Edge-Native Lightweight Model Design and Scheduling for Vehicle Localization Services
Jiaqi Chen and Zhicheng Cai

——Session **S8**——

Service Recommendation and Selection II

December 2, Tuesday 16:00-17:30 China Merchants Hall 1

Chair ***Cesare Pautasso,*** *USI Lugano, Switzerland*

ARrec: A GitHub Awesome Repository Recommendation Service based on Graph Mining
Jiaqi Zhang, Yanchun Sun, Sihan Wang and Xiaohan Zhao

MOTSAD: Multi-Objective Optimization for Time Series Anomaly Detection in Microservice
Xitao Tang, Gou Tan and Pengfei Chen

Predicting Security Weaknesses in MicroserviceArchitectures using Structural Metrics
Soundos Benni, Meriem Hathat, Jeisson Vergara-Vargas, Soumia Zellagui, Chouki Tibermacine and Salah Sadou

LDP-QWSP: A General Local Differential Privacy Framework for QoS-based Web Service Prediction
Fuchang Luo, Haonan Wu, Shunshun Peng, Quanwang Wu, Hongbing Wang, Mengmeng Yang and Taolin Guo

——Session **S9**——

Serverless Computing

December 2, Tuesday 16:00-17:30 China Merchants Hall 2

Chair ***Jian Yang,*** *Macquarie University, Australia*

Multi-Agent-Driven Dual-Layer Serverless Adaptive Ensemble Inference Method
Yingxin Wang, Binbin Feng and Zhijun Ding

Quantifying Serverless Elasticity: The gumeter Benchmark Suite
Germán T. Eizaguirre, Enrique Molina-Giménez, Gerard Finol, Carlos Molina and Pedro García-López

HybridFP: Divide-and-conquer Serverless Function Provision for Mitigating Cold Starts
Yifan Xie, Shuaiyu Xie, Jian Wang and Bing Li

QONNECT: A QoS-Aware Orchestration System for Distributed Kubernetes Clusters
Haci Ismail Aslan, Syed Muhammad Mahmudul Haque, Joel Witzke and Odej Kao

Privacy-Preserving Revenue Prediction in Service-Oriented Industrial Supply Chains
Xianghui Hu, Kai Di, Zhenyu Wang, Xinran Zhuang, Yichuan Jiang, Hang Liu and Pan Li

——Session **S10**——

Services at the Edge II

December 2, Tuesday 16:00-17:30 China Merchants Hall 3

Chair ***Pablo Fernandez,*** *University of Seville*

SCSTL: Spatial Composite Signal Temporal Logic for IoT Service Monitoring
Ruixi Pan, Zhangbing Zhou, Deng Zhao, Sami Yangui and Jiangwei Li

SDAD: A Service Deployment Method Based on Association Rule and Reinforcement Learning for Edge Computing
Hanzhi Xu, Yanjun Shu, Wei Emma Zhang, Zhuangyu Ma, Zhan Zhang and Decheng Zuo

EdgeInfer-TP: A Collaborative Tensor Parallelism Inference System for Heterogeneous Edge Devices
Yutao Zhang, Wentao Zhong, Xuerui Liu, Fengyi Huang, Wenhua Wang, Tian Wang and Weijia Jia

DIJS: A Dual Interference-aware Job Scheduling Framework for Co-located Data Centers
Qin Hua, Shiyou Qian, Yufeng Deng, Kaixuan Zhang, Dingyu Yang, Jian Cao and Guangtao Xue

SLIE: A Secure and Lightweight Cryptosystem for Data Sharing in IoT Healthcare Services
Xuan Son Ha, Nguyen Quoc Anh, Tuan Phat Tran-Truong, Thanh Tuan Le and Thanh Nghiem Pham

Symposium on AI for Service Engineering Education

December 2, Tuesday 14:00-17:30 China Merchants Hall 4

Chair ***Zhiying Tu,*** *Harbin Institute of Technology, China*

Theme

Software Services Engineering Education and Innovative Talents Cultivation in the AI Era

Introduction

Against the backdrop of rapid AI advancement, the boundary between software services engineering and intelligent technology is increasingly blurred. Traditional educational models and talent training frameworks are facing urgent demands for transformation. This forum focuses on the core theme of "Software Services Engineering Education and Innovative Talents Cultivation in the AI Era," aiming to discuss key topics and share cutting-edge insights such as the AI empowers software service engineering education, the reconstruction of competency standards for innovative talents in the intelligent era, and the collaboration mechanism between academia and industry to promote practical-oriented education.

Ultimately, this forum seeks to pool wisdom from all parties, explore a sustainable development path for software services engineering education in the AI era, and lay a solid foundation for cultivating high-quality innovative talents who can adapt to technological changes and drive industrial innovation.

Invited Speakers

Xiaofei Xu, Harbin Institute of Technology, China
Shijun Liu, Shandong University, China
Marco Aiello, University of Stuttgart, Germany (to be confirmed)
Wanlei Zhou, City University of Macau, China
Michael Sheng, Macquarie University, Australia

Tutorial A

December 2, Tuesday 17:30-19:00 China Merchants Hall 1

Tutorial Title

Knowledge Graph-Based Orchestration: From Business Context to Autonomous Scaling in Kubernetes

Authors

Jeremy MECHOUCHE, Yann Ramusat

Tutorial Chair

Jeremy Mechouche, Devoteam RESEARCH, FRANCE

Speaker

Jeremy Mechouche, Devoteam RESEARCH, FRANCE

Introduction

Modern service-oriented systems, particularly those deployed on platforms like Kubernetes , are confronted with a "growing complexity gap". Standard orchestration tools, while efficient at managing resources , frequently lack the business context required for intelligent decision-making. This tutorial introduces a paradigm shift known as Knowledge Graph-based orchestration. The core concept is to build and maintain a dynamic Knowledge Graph that models the entire IT landscape , successfully connecting high-level business demands with low-level infrastructure resources. This unified, real-time "brain" aims to bridge the gap that separates technical alerts from their actual business impact. The practical application of this approach moves beyond simple metric-based autoscaling , enabling truly autonomous, service-oriented operations. The tutorial features a hands-on case study demonstrating how to use the graph to make context-aware scaling decisions specifically within a Kubernetes environment. This session is intended for researchers, PhD students, cloud architects, and DevOps/SRE engineers. While a foundational understanding of SOA and cloud computing is required , and basic familiarity with Kubernetes concepts is recommended , no prior expertise in Knowledge Graphs is necessary.

Tutorial B

December 2, Tuesday 17:30-19:00 China Merchants Hall 2

Tutorial Title
Cloud-native Systems for Fine-grained and Dynamic LLMs Serving

Authors
Minxian Xu, Jingfeng Wu

Tutorial Chair
Minxian Xu, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China

Speaker
Minxian Xu, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China
Jingfeng Wu, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China
Junhan Liao, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China

Introduction
The proliferation of Large Language Model (LLM) inference services in cloud environments has created unprecedented demand for efficient resource management. As companies like Amazon, Google, and Microsoft invest heavily in Model-as-a-Service (MaaS) paradigms, elastic scaling has become a critical capability for balancing service availability with cost efficiency. This tutorial explores cloud-native approaches to LLM serving, addressing three fundamental challenges: imprecise workload profiling due to variable input/output lengths, coarse-grained scaling at the instance level, and inflexible deployment configurations. In this tutorial, we introduce module-level elastic scaling techniques that operate at the Transformer layer granularity, achieving up to 4× throughput improvements over traditional approaches. Through hands-on demonstrations of the CoCoServe platform developed by us, participants will learn how intelligent request scheduling, fine-grained resource orchestration, and dynamic deployment strategies can dramatically enhance LLM serving efficiency. This tutorial bridges cutting-edge research with practical implementation, offering valuable insights for the service computing community navigating the rapidly evolving landscape of AI services.

Tutorial C

December 2, Tuesday 17:30-19:00 China Merchants Hall 3

Tutorial Title
Ubiquitous LLM Inference as a Service for Next-Generation Distributed Autonomous Devices

Authors
Mengwei Xu, Danyang Zheng, Ruichen Zhang

Tutorial Chair
Danyang Zheng, Southwest Jiaotong University, Sichuan, China

Speaker
Danyang Zheng, Southwest Jiaotong University, Sichuan, China

Introduction
Large Language Models are moving beyond cloud only deployments into ubiquitous intelligence for robots, drones, and other autonomous systems that operate under tight latency and energy constraints. This tutorial frames LLM inference as a service across cloud to edge to device. We outline systems techniques that address these issues, including we cover efficient on-device multimodal models (VLMs and omni models) on resource-constrained hardware such as smartphones and drones, emphasizing algorithm-level and system-level co-design for practical performance. In parallel, we conduct illustration of adaptive expert routing in mixture-of-experts, hierarchical and context caching with reuse, collaborative pipelines, and service-oriented orchestration. Participants will gain architectural blueprints and runtime mechanisms for dependable, scalable, and context-aware inference services. The tutorial distills techniques featured in venues such as ASPLOS and MobiCom, and uses our open-source inference engine mllm: https://github.com/UbiquitousLearning/mllm to demonstrate real implementations and applications. In parallel, we discuss when to centralize vs. partition, and how to co-optimize placement with service objectives through graceful degradation, failover, and monitoring for edge workloads. Short case studies in services computing with emerging AI inference infrastructure will show patterns that fit intelligence anywhere and anytime.

Day 3: December 3, 2025 (Wednesday)

Panel: Engineering Service-Oriented Architectures and Agents in the Era of Foundation Models

December 3, Wednesday 10:30-12:00 China Merchants Hall

Moderator

Walid Gaaloul, *Télécom SudParis, Institut Polytechnique de Paris*

Chair

Antonio Ruiz Cortés, *University of Sevilla*

Panelists

Fabio Casati, University of Trento
Jeremy Mechouche, Devoteam Research
Minxian Xu, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences
Danyang Zheng, Southwest Jiaotong University
Mujiangshan Wang, Shenzhen Kaihong Digital Industry Development Co., Ltd.

Introduction

This panel will examine how to engineer service-oriented architecture (SOA) and service-oriented computing (SOC) systems when many "services" are long-lived, self-improving software agents powered by foundation models (FMs). Panelists will discuss how this shift reshapes the entire engineering lifecycle: requirements, development, deployment, continuous integration/continuous delivery (CI/CD), and operations, and its implications for large-scale, dependable service ecosystems.

Key discussion themes

Agent-centric development and CI/CD: Engineering practices for testing, reviewing, and rolling back FM-driven agents within SOA/SOC pipelines; what changes when behavior is learned rather than hard-coded.

Intent-driven orchestration across the cloud-edge continuum: Translating requirements into placement and coordination policies for services and agents spanning cloud, edge, and device tiers.

Research Challenges: Panelists will delve into critical challenges, including reliably extracting and formalizing user intents from FMs for requirements engineering, governing and verifying self-improving agentic services in SOA/SOC pipelines, and ensuring safety, security, and energy efficiency in FM-driven service ecosystems.

Sightseeing

December 3, Wednesday 13:30-17:30

Route 1: Experience HarmonyOS Intelligent Technology

Step into the future of IoT at Shenzhen Kaihong Digital Industry Development Co., Ltd. (Kaihong), where cutting-edge operating systems meet real-world innovation. Discover how their self-developed KaihongOS and device management platform are revolutionizing smart transportation, urban governance, energy, healthcare, and beyond.

About the Destination

Kaihong has created an open and leading 'Kaihong Secure Digital Foundation' through the collaborative innovation of its self-developed KaihongOS operating system and KaihongOS Meta device management platform. The company has achieved large-scale deployment across multiple sectors including smart transportation, smart cities, smart energy, and smart healthcare, effectively addressing traditional industry pain points such as device collaboration challenges, data silos, and fragmented ecosystems.

Within the OpenHarmony community, Kaihong transforms original community technology into stable, commercially viable KaihongOS distributions. Together with ecosystem partners, they have built a rich hardware product matrix including robots, drones, industrial tablets, and all-scenario experiment kits, continuously expanding the industrial application boundaries of OpenHarmony.

Through this immersive visit and hands-on experience, explore the evolution of operating systems, discover the technical highlights of OpenHarmony, and uncover the challenges and solutions in developing next-generation OS for AIoT. Witness firsthand how OpenHarmony empowers digital and intelligent transformation across transportation, urban management, energy, education, and elderly care sectors, building a leading ecosystem that supports public safety and sustainable development.

Time	Itinerary
13:30	**Depart from hotel entrance, bus transfer to destination**
14:20	**Arrive at Kaihong. Experience robot & drone collaboration, office collaboration systems, smart elderly care solutions, and industry-academia-research ecosystem products**
16:30	**Conclude visit with group photo, return to banquet venue**
17:30	**Conference Banquet**

Sightseeing

December 3, Wednesday 13:50-17:30

Route 2: SF Express Low-Altitude Smart Logistics Tour

Witness the future of logistics at SF Express headquarters. Explore cutting-edge drone delivery systems, autonomous vehicles, and intelligent logistics operations that are redefining last-mile delivery and supply chain innovation.

About the Destination

SF Express is China and Asia's largest, and the world's fourth-largest comprehensive logistics service provider, offering domestic and international end-to-end one-stop comprehensive logistics services. Leveraging leading technology R&D capabilities, SF is committed to building a digital and intelligent supply chain ecosystem, becoming a globally respected leader in digital logistics solutions.

Time	Itinerary
13:50	Gather at hotel entrance, bus transfer to SF Express headquarters
14:30	Arrive at SF Express. Guided tour including drone hangar collaboration, autonomous delivery vehicles, logistics center operations, exhibition hall, and hands-on logistics experience
16:50	Conclude visit with group photo, return to banquet venue
17:30	Conference Banquet

Sightseeing

December 3, Wednesday 13:30-17:40

Route 3: Nantou Ancient City & Mangrove Coastal Ecological Park

Journey through history and nature on this cultural and ecological tour. Explore the ancient streets of Nantou, the historical heart of Shenzhen, then immerse yourself in the serene beauty of Mangrove Coastal Park, where coastal wetlands meet urban skyline.

About the Destination

Nantou Ancient City (also known as Xin'an Ancient City) covers approximately 70,000 square meters and is currently Shenzhen's most significant historical and cultural tourism site. Located at the eastern shore of the Pearl River estuary, Nantou has served throughout history as the administrative center of the Lingnan coastal region, a maritime defense fortress, and a hub for sea transportation and foreign trade. It is the historical source of the Shenzhen-Hong Kong-Macao region. Notable sites include the South Gate, Guansheng Temple, Xin'an Opium Bureau, and Dongguan Guild Hall.

Mangrove Coastal Ecological Park is a nature reserve established to protect mangrove forests. This free coastal park features lush vegetation and excellent air quality, with greenery stretching as far as the eye can see. Located on the north-eastern coast of Shenzhen Bay at the mouth of Shenzhen River, unlike Dameisha and Xiaomeisha beaches, this park features tidal flats rather than sandy shores. The small fish and crabs on the mudflats attract numerous water birds, creating a unique natural spectacle. Here, you can observe distinctive mangrove phenomena up close, including 'vivipary,' 'plank roots,' and 'aerial roots.'

Time	Itinerary
13:30	Gather at hotel entrance, bus transfer to Nantou Ancient City
14:20	Arrive at Nantou Ancient City, free exploration
15:50	Conclude Nantou visit, bus transfer to Mangrove Coastal Ecological Park
16:20	Arrive at Mangrove Park, leisurely walk and nature observation
17:00	Conclude visit with group photo, return to banquet venue
17:40	Conference Banquet

Day 4: December 4, 2025 (Thursday)

——Session **S11**——

Services at the Edge III

December 4, Thursday 10:30-12:00 China Merchants Hall 1

Chair ***Hong-Linh Truong,*** *Aalto University*

Ahead-of-Time Scheduling for Workflow Applications in Edge Computing
Cheng Qian, Haoyu Luo and Gansen Zhao

OctoCross: Workload-Aware Request Offloading Scheduling in Cross-Camera Collaboration
Jinghan Cheng, Thanh-Tung Nguyen, Lucas Liebe, Yuheng Wu, Nhat-Quang Tau, Pablo Espinosa and Dongman Lee

D3FU: Data-Free Distillation Driven Federated Unlearning for Service-Oriented Computing
Xiuyi Zhang, Xuejun Li, Aiting Yao, Jia Xu, Chengzu Dong, Frank Jiang, Xiao Liu and Yun Yang

Preference-aware crowdsourcing of IoT energy services
Abdallah Lakhdari, Amani Abusafia, Shing Tai Tony Lui and Athman Bouguettaya

——Session **S12**——

Software as a Service and Cloud Infrastructure II - Data Centers

December 4, Thursday 10:30-12:00 China Merchants Hall 2

Chair ***Sebastian Werner,*** *TU Berlin*

LightLoader: Accelerate Python FaaS Cold-start via Multi-level Source Code Optimization
Pengyu Chen, Wei Chen, Guoquan Wu and Jun Wei

Bridging Service Diversity and CPU Heterogeneity through Program Similarity-Driven Scheduling
Jiayin Luo, Yuxin Ma, Xinkui Zhao, Wei Zhou and Jianwei Yin

Optimizing QoS fulfillment of Drone Services
Syeda Amna Rizvi and Athman Bouguettaya

——Session **S13**——

Business Processes II

December 4, Thursday 10:30-12:00 China Merchants Hall 3

Chair ***Zhiying Tu,*** *School of Computer Science and Technology Harbin Institute of Technology (Weihai)*

P-MDP: A Framework to Optimize NFPs of Business Processes in Uncertain Environments
Jun Peng, Jingwei Zhu, Liang Zhang and Hong-Linh Truong

Business Process Discovery through Agentic Generative AI
Pierre Lindenberg, Indika Kumara, Joshua Owotogbe, Willem-Jan van den Heuvel and Damian Andrew Tamburri

Usage Control for Process Discovery through a Trusted Execution Environment
Valerio Goretti, Sabrina Kirrane and Claudio Di Ciccio

——Session **S14**——

Software as a Service and Cloud Infrastructure I - QoS in the Cloud

December 4, Thursday 10:30-12:00 China Merchants Hall 4

Chair ***Jose Antonio Parejo,*** *University of Seville*

IA-driven and QoS-aware Orchestration of Interdependent Services in the Cloud Continuum
Henda Sfaxi, Dia Jean Cédric Sanou, Imene Lahyani, Sami Yangui and Mohamed Jmaiel

Integrating Terms of Service and Service Level Agreements for Automating Cloud Service Management
Elena Molino-Peña, José María García and Antonio Ruiz-Cortés

SDS-Cloud: Secure Deduplication and Sharing Without Third-Party Authorities for Clouds
Yuhan Chen, Peng Liu, Lie Wang, Shanyu Gan and Danping Yang

——Session **S15**——

Microservice Architectures - Microservices Design

December 4, Thursday 14:00-15:30 China Merchants Hall 1

Chair ***Jose María García,*** *University of Seville*

Using Guided Community Detection to Improve Existing Microservice Designs
Patric Genfer and Uwe Zdun

A Pattern-Driven and LLM-Assisted Approach for Decomposing Monolithic ML-Based Systems into Microservices
Hakim Ghlissi, Mohamed El Hadi Boukhatem, Manel Abdellatif and Naouel Moha

Service-Level Energy Modeling and Experimentation for Cloud-Native Microservices
Julian Legler, Sebastian Werner, Maria C. Borges and Stefan Tai

——Session **S16**——

Software as a Service and Cloud Infrastructure III - Pricing

December 4, Thursday 14:00-15:30 China Merchants Hall 2

Chair ***Minxian Xu,*** *Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences*

iSubscription: Bridging the Gap Between Contracts and Runtime Access Control in SaaS
Alejandro García-Fernández, Jose Antonio Parejo and Antonio Ruiz-Cortés

OSAF: Open Service-Available First Routing Mechanism for Computing Power Network
Yunkang Zhang, Qiang Wu, Ran Wang, Jie Hao, Hao Liu and Yiyun Xu

A-MINT: An LLM Pipeline for Automated Modeling of iPricings from SaaS Pricing Pages
Francisco Javier Cavero, José Antonio Parejo, Juan C. Alonso and Antonio Ruiz-Cortés

——Session **S17**——

Business Processes III

December 4, Thursday 14:00-15:30 China Merchants Hall 3

Chair ***Hailiang Zhao,*** *School of Software Technology, Zhejiang University*

GOProQ: A Graphical Query Language for Object-Centric Process Analysis
Gyunam Park, Jan Niklas Adams and Daniel Schuster

BPMN4BC: A Simple BPMN Extension for Blockchain-Enabled Business Process Modeling
Hassan Atwi and Cesare Pautasso

ProcNet: Cross-Modal Process Recommendation via LLMs and GCNs
Yumeng Jin, Leilei Lin, Siyu Li, Haipeng Wan, Wangyouqi Geng and Wenlong Chen

——Session **S18**——

Privacy, Security and Trust

December 4, Thursday 14:00-15:30 China Merchants Hall 4

Chair ***Flavio Maria De Paoli,*** *University of Milano-Bicocca*

Towards Trusted Service Monitoring: Verifiable Service Level Agreements
Fernando Castillo, Eduardo Brito, Sebastian Werner, Pille Pullonen-Raudvere and Jonathan Heiß

A Service-Oriented Digital Twin Architecture for Seamless Reliability Verification of IoT Systems
Janik-Vasily Benzin, Juergen Mangler and Stefanie Rinderle-Ma

Detecting AI-Assisted Tampering in Crowdsourced IoT Service Trust Information
Thilina Lokuruge and Athman Bouguettaya

Hosts: Harbin Institute of Technology
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