34th International Conference on

Software & Data Engineering (SEDE 2025)

PROGRAM

October 20–21, 2025

Holiday Inn Downtown Superdome,
New Orleans, Louisiana, USA

Sponsored by

International Society for
Computers and Their Applications

278 Mankato Ave. #220
Winona, MN 55987
E-mail: isca@isca-hq.org; website: www.isca-hq.org

34th International Conference on
Software & Data Engineering
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SPONSOR

International Society for Computers and Their Applications (ISCA)

General Chair: **Dr. Nick Rahimi, University of Southern Mississippi, USA**

Program Co-Chairs: **Dr. Venkatasivakumar Margapuri, Villanova University, USA**

Dr. Noor Amiri, University of Alabama, USA

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Program at a Glance (All times in CDT)

Monday 10/20	7:30 am - 8:30 am	**Registration and Breakfast (Coffee and Pastry)**
	8:45 am – 9:00 am	**Opening**
	9:00 am –10:00 am	**Keynote: Prof. Chaoyang Zhang**
	10:00 am – 10:30 am	Break
	10:30 am -12:00 pm	**Session 1: Software Engineering and Testing** Paper ID: 38 Paper ID: 9 Paper ID: 8 Paper ID: 20
	12:00 pm – 1:30 pm Conference Luncheon	
	1:30 pm – 3:00 pm	**Session 2: Data Engineering and Analytics** Paper ID: 22 Paper ID: 19 Paper ID: 28 Paper ID: 34
	3:00 pm – 3:30 pm	Break
	3:30 pm – 5:00 pm	**Session 3: Cybersecurity and Privacy** Paper ID: 31 Paper ID: 32 Paper ID: 15 Paper ID: 26 Paper ID: 10
Tuesday 10/21	8:00 am – 9:00 am	**Registration and Breakfast (Coffee and Pastry)**
	9:00 am – 10:00 am	**Keynote: Mr. Nat Prakongpan**
	10:30 am –12:00 pm	**Session 4: Healthcare Informatics and IoT** Paper ID: 39 Paper ID: 17 Paper ID: 16 Paper ID:11 Paper ID: 27
	12:00 pm – 1:30 pm Lunch (on your own)	
	1:30 pm – 3:00 pm	**Session 5: AI and Machine Learning Applications** Paper ID: 23 Paper ID:36 Paper ID:37 Paper ID: 24
	3:00 pm – 3:30 am	Break
	3:30 pm – 5:00 pm	**Session 6: Advanced AI Applications and Industry Solutions** Paper ID: 21 Paper ID: 41 Paper ID: 29 Paper ID:1

Monday, October 20, 2024

7:30 a.m. – 8:30 p.m. **REGISTRATION and BREAKFAST (Coffee, Tea, Pastries) Location: 8th Floor Lobby**

8:45 a.m. – 9:00 a.m. **WELCOME, Room: Bayou Ballroom A, Floor 8**

9:00 a.m. – 10:00 a.m. KEYNOTE SPEAKER

Professor Chaoyang Zhang, Ph.D.
University of Southern Mississippi

School of Computing Sciences and Computer Engineering
Professor, Graduate Program Coordinator, Former School Director

From Data to Discovery: AI-Driven Research in Health Informatics

Abstract: Health informatics lies at the intersection of data, computation, and discovery. With the rapid growth of biomedical big data, traditional analytic approaches are no longer sufficient. This keynote will explore how advances in data engineering, machine learning and artificial intelligence are transforming health informatics into a data-driven science of discovery.

Location: Bayou Ballroom A, Floor 8

10:00 a.m. – 10:30 a.m. COFFEE BREAK (Location: 8th Floor Lobby)

SESSION 1

Software Engineering and Testing

Monday, October 20, 10:30 a.m. – 12:00 p.m.
Session Chair: Dr. Venkat Margapuri
Room: Bayou Ballroom B, Floor 8

1. **The Potential of Large Language Models in Automating Software Testing: From Generation to Reporting**
   - *Betim Sherifi, Khaled Slhoub, Fitzroy Nembhard*
2. **Hybrid Taint Analysis for React: Automated XSS Prevention**
   - *Vaishnavi Gudur*
3. **Prompt-Driven Test Generation: Leveraging Large Language Models and Knowledge Graphs for Quality Assurance in Data-Intensive Software System**

- *Srinivas Reddy Kosna*

4. **A Customizable Ad-hoc Java Client that Works with Bare Webservers**
   - *Nirmala Soundararajan*

12:00 p.m. – 1:30 p.m. CONFERENCE LUNCHEON and BEST PAPER AWARDS
Location: Room: JAZZ/DIXIELAND

SESSION 2

Data Engineering and Analytics
Monday, October 20, 1:30 p.m. – 3:00 p.m.
Session Chair: Dr. Rahimi
Room: Bayou Ballroom B, Floor 8

1. **DuckDB-Powered Geo-Spatial Analytics for hit-and-run Incidents: A Case Study on Montgomery County, Maryland, Open Data**
   - *Sarika Rajeev, Atma Sahu, Vishrut Sawarnya*

2. **Pairwise Clustering on Numerical Datasets by Translation**
   - *Jiajie Yang, Jessica Chen*

3. **Structural and Connectivity Patterns in the Maven Central Software Dependency Network**
   - *Daniel Ogenrwot, John Businge, Shaikh Arifuzzaman*

4. **Hand Line Classification**
   - *Somrak Petchartee*

3:30 p.m. – 5:00 p.m. COFFEE BREAK (8th Floor Lobby)

SESSION 3

Data Analysis and Security
Monday, October 20, 3:30 p.m. – 5:00 p.m.
Session Chair: Dr. Gudla
Room: Bayou Ballroom B, Floor 8

1. **Applications Of Positive Unlabeled Learning in the field of DDoS attacks**
   - •*Gagana Sathya Narayana Prasad, Charan Gudla*

2. **Robust Intrusion Detection in IoV Using PU Learning and Supervised Ensembles with Synthetic Data Augmentation on CICIoV2024**
   - •*Yashwanth Reddy Kovvuri, Charan Gudla*

3. **Adversarial Machine Learning for Robust Password Strength Estimation**

- *Pappu Jha, Hanzla Hamid, Oluseyi Olukola, Ashim Dahal, Nick Rahimi*

4. **Machine Learning-Based AES Key Recovery via Side-Channel Analysis on the ASCAD Dataset**
   - *Mukesh Poudel, Nick Rahimi*

5. **Leveraging Generative AI for Proactive Security and Automated Remediation in Cloud-Native CI/CD Pipelines**
   - *Akshay Mittal, Vivek Venkatesan*

Tuesday, October 21, 2024

8:00 a.m. – 10:00 a.m. **REGISTRATION – Coffee, tea, Pastries**
Location: 8th Floor Lobby

9:00 a.m. – 10:00 a.m. **KEYNOTE SPEAKER**

Mr. Nat Prakangpan
Vice President at Cyberbit
Beyond the Buzz: Delivering Real Outcomes in the Age of AI Skepticism

Abstract: As "AI-powered" becomes the most overused phrase in tech marketing, buyers are responding with growing skepticism. The age of novelty is over—executives and practitioners alike are demanding tangible results. In this keynote, we'll explore the shift from hype to outcomes, and what it means for builders and vendors.

Location: Bayou Ballroom A, Floor 8

SESSION 4

Healthcare Informatics and IoT
Tuesday, October 21, 10:30 a.m. – 12:00 p.m.
Session Chair: Dr. Strait
Room: Bayou Ballroom B, Floor 8

1. **Optimizing Healthcare Pipelines for patient Benefit: A Data Engineering Perspectives on Preauthorization Delays and Denials**
   - *Rakesh Pai, Jothsna Praveena Pendyala*

2. **Design and Evaluation of a Scalable Data Pipeline for AI-Driven Air Quality Monitoring in Low- Resource Settings**

- *Richard Sserunjogi, Daniel Ogenrwot, Nicholas Niwamanya, Noah Nsimbe, Martin Bbaale, Benjamin SSempala, Noble Mutabazi, Raja Fidel Wabinyai, Deo Okure, Engineer Bainomugisha*

3. **Interpretable AI with Lightweight Parallelism for Real-Time Auto Insurance Claims Triage**
   - *Laurance Strait*

4. **Drone Simulation in Precision Agriculture Using Unity**
   - *Mimansha Khadka, Balsem Jridi, Aidan Patrick*

5. **Predicting Early Breast Cancer Recurrence with Machine Learning**
   - *Mohammad Owrang Ojaboni*

12:00 p.m. – 1:00 p.m. LUNCH *(on your own)*

SESSION 5

AI and Machine Learning Applications

Tuesday, October 21, 1:30 p.m. – 3:00 p.m.
Session Chair: Dr. Noor
Room: Bayou Ballroom B, Floor 8

1. **Analysis of Programming Capability of LLMs in the Context of Computer Science I**
   - *Junfeng Qu, Shuju Bai, Byron Jeff, Ebrahim Khosravi*

2. **Beyond Accuracy: Evaluating LLMs for validating community service provider directory**
   - *Saviz Saei, Sadhan Ghimire, Sujan Ranjan Reddy Anreddy*

3. **Trustworthy Design Patterns for Multi-Agent Software Systems**
   - *Akshata Kishore Moharir, Jay Prakash Thakur*

4. **Prosense - Defending Text Generation with Adversarial Feedback**
   - *Anu Baluguri, Zhaoxian Zhou, Yaswanth Raj Repakula, Vasudha Pasumarthy*

SESSION 6

Advanced AI Applications and Industry Solutions

Tuesday, October 21, 3:30 p.m. – 5:00 p.m.
Session Chair: Dr. Martinez
Room: Bayou Ballroom B, Floor 8

1. **Designing Interpretable AI Models-Lightweight Parallelism for Real-Time Malware Detection & Prevention**
   - *Zachariah McCullough, Jose Martinez Cruz*

2. **Mitigating Hallucination Risks in GenAI Compliance Advisory Systems for the Financial Industry**

- *Kunal Khanvilkar, Varun Shinde*

3. **Cloud-Native Generative AI for Automated Planogram Synthesis: A Diffusion Model Approach for Multi-Store Retail Optimization**
   - *Ravi Teja Pagidoju, Shriya Agarwal*
4. **Edge-Based Learning for Improved Classification Under Adversarial Noise**
   - *Manish Kansana, Keyan Alexander Rahimi, Elias Hossain, Iman Dehzangi, Noorbakhsh Amiri Golilarz*

5:00 p.m. CONFERENCE ENDS