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 (SEDE 2025)

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

International Program Committee

Name Affiliation

Takaaki Goto Toyo University, Japan Karan Gupta SunPower Corporation, USA

Mirsalar Kamari University of Southern Mississippi, USA

Koushik Maddali Southern Illinois University, USA

Jose Martinez University of Southern Mississippi, USA

Majid Memari Utah Valley University, USA
Md. Saef Ullah Miah American International University,

Saydul Akbar Murad University of Southern Mississippi, USA

Abu Jafar Md University of Tennessee, USA

Abhay Paroha Schlumberger, USA
Niketa Penumajji CivicPlus, USA
Chinmay Rajguru GKN Aerospace, USA

Aakash Sinha Grubbrrr, USA

Abdoljalil Addeh University of Calgary, CA

Abburi Chinnikrishna Visa, USA Chirag Agarwal Novelis, USA

Nic Herndon East Carolina University, USA
Sujan Reddy Anreddy Mississippi State University, USA

Gaurav Saxena Ford Motor Company, USA

Kishan Gupta Capgemini, USA
Pavan Vemuri SDVerse, USA
Pritam Roy Capgemini, USA
Ravi Teja Thutari Hopper, USA

Sai Kalyan Reddy Pentaparthi ST Engineering iDirect, USA

Shubham Jindal TikTok, USA
Akshay Mittal PayPal, USA
Vivek Venkatesan Vanguard

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: Al 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 Al 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

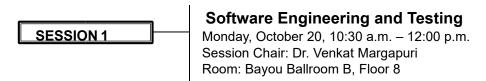
School of Computing Sciences and Computer Engineering Professor, Graduate Program Coordinator, Former School Director

From Data to Discovery: Al-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)



- 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

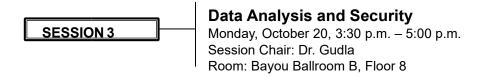
12:00 p.m. – 1:30 p.m. CONFERENCE LUNCHEON and BEST PAPER AWARDS

Location: Room: JAZZ/DIXIELAND

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)



- 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 Al Skepticism

Abstract: As "Al-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

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 Al-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)



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



- 1. Designing Interpretable Al Models-Lightweight Parallelism for Real-Time Malware Detection & Prevention
 - Zachariah McCullough, Jose Martinez Cruz
- 2. Mitigating Hallucination Risks in GenAl 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