

# **40<sup>th</sup> International Conference on Computers And Their Applications (CATA 2025)**

## **PROGRAM**

March 17–18, 2025

Crowne Plaza Hotel,  
San Francisco Airport CA, US

Sponsored by



International Society for  
Computers and Their Applications

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# 40<sup>th</sup> International Conference on **Computers And Their Applications** (CATA 2025)

## **SPONSOR**

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**International Society for Computers and Their Applications (ISCA)**

**Conference Chair:** Dr. Ajay Bandi, Northwest Missouri State University, USA

**Program Chair:** Dr. Mohammad Hossain, Indiana University Indianapolis, USA

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## **Program at a Glance (All times in PDT)**

<b>Monday 3/17</b>	7:30 am - 8:30 am	<b>Registration and Breakfast (Coffee and Pastry)</b>
	8:30 am – 9:00 am	<b>Opening</b>
	9:00 am –10:00 am	<b>Keynote I: (Common to both conferences)</b>
	10:00 am – 10:30 am	Break
	10:30 am -12:00 pm	<b>Session 1:</b> Paper ID: 06 Paper ID: 11 Paper ID: 16 Paper ID: 21
	<b>12:00 pm – 1:15 pm Conference Luncheon (Common to both conferences)</b>	
	1:30 pm – 3:00 pm	<b>Session 2:</b> Paper ID: 07 Paper ID: 14 Paper ID: 17 Paper ID: 24
	3:00 pm – 3:30 pm	Break
	3:30 pm – 5:00 pm	<b>Session 3:</b> Paper ID: 08 Paper ID: 25 Paper ID: 27 Paper ID: 28

<b>Tuesday 3/18</b>	7:30 am – 8:00 am	<b>Registration and Breakfast (Coffee and Pastry)</b>
	8:00 am – 9:00 am	<b>Keynote II: (Common to both conferences)</b>
	9:00 am – 9:30 am	Break
	9:30 am –11:30 pm	<b>Session 4:</b> Paper ID: 13 Paper ID: 05 Paper ID: 26 Paper ID: 04 Paper ID: 10
	<b>11:30 am – 12:30 pm Lunch Break</b>	
	12:30 pm – 1:00 pm	<b>Session 5:</b> Paper ID: 15 Paper ID: 20

**Monday, March 17, 2025**

**7:30 a.m. – 8:30 a.m.**

**REGISTRATION and BREAKFAST**  
(Coffee, Tea, pastries)  
Location: Bayside Room

**8:45 a.m. – 9:00 a.m.**

**WELCOME by Conference Organizers**

**Ajay Bandi, Northwest Missouri State University,  
USA (CATA Conference Chair)**  
**Mohammad Hossain, Indiana University  
Indianapolis, USA (CATA Program Chair)**  
Location: Plaza Ballroom I

**9:00 a.m. – 10:00 a.m.**

**KEYNOTE SESSION I**

**Speaker: Dr. Jacob Luber**

The University of Texas at Arlington, USA

**Title: Driving Discovery in Spatial Proteomics: Protein  
Sequencing, Domain-Adaptive Imaging, and Generative AI**

*Session Chair:* Dr. Hisham Al-Mubaid, University of Houston-  
Clear Lake, USA

Location: Plaza Ballroom I

**10:00 a.m. – 10:30 a.m. COFFEE BREAK (Bayside Room)**

**SESSION 1**

**ALGORITHM AND AI - I**

Monday, March 17, 10:30 a.m. – 12:00 p.m.

Session Chair: Ajay Bandi (Northwest Missouri State University, MO, USA)

Location: Plaza Ballroom I

- 1. Improving the Performance of 3D Printed Molds for Injection Molding using Hollow Structures**  
Xiaowei Zhu, Casey Coffland, Faryar Etesami, and Hormoz Zareh  
(Portland State University)
- 2. AI-aided documentation of urban graffiti using NeRF and Gaussian Splatting**  
Naai-Jung Shih and Ching-Hsuan Kung (National Taiwan University of  
Science and Technology)
- 3. Measurement and Characterization of Problems with Public API Support: A Case Study on  
YouTube APIs**  
Sultan Alanazy (Imam Abdulrahman Bin Faisal University, Saudi Arabia) and  
Jeff Tian (Southern Methodist University, Texas, USA)
- 4. Conversational AI in Healthcare: A Framework for Privacy, Security, Ethics,  
Transparency and Harm Prevention** Ajay Bandi, Haebin Noh, Nagiri Gomathi, Durga  
Sambhavi Mamillapalli, Hema Pradeepthi Gurram, and Bhanu Prakash Bathini (Northwest  
Missouri State University, MO, USA)

**12:00 p.m. – 1:30 p.m. CONFERENCE LUNCHEON (Best Paper Award Announcement)**

**Location: Bayside Room**

**SESSION 2**

**MACHINE LEARNING AND DATA MINING**

Monday, March 17, 1:30 p.m. – 3:00 p.m.

Session Chair: Ajay Bandi (Northwest Missouri State University, MO, USA)

Location: Plaza Ballroom I

- 1. Machine Learning for Real World Water Consumption Forecasting**  
Claudia Maussner and Erich Teppan (Fraunhofer Austria Research GmbH)
- 2. Comparative Analysis of Machine Learning Classifiers for Yellow Fever Diagnosis Using Causative Data: Evaluating Naïve Bayes, KNN, RIPPER, and PART**  
Said Baadel (Mount Royal University, Mathematics and Computing, Alberta, Canada), Kingsley Attai (Ritman University, Nigeria), Brian Bassey (University of Uyo Teaching Hospital, Nigeria), Ekerette Attai (Brokline Foundation, Nigeria), Asim Majeed (Birmingham City University, UK), and Faith-Michael Uzoka (Mount Royal University, Canada)
- 3. An Automated Framework of Ontology Generation for Abstract Concepts using LLMs**  
Rafi Rashid Chowdhury, Takaaki Goto, Kensei Tsuchida, Tadaaki Kirishima (Toyo University, Japan), and Ajay Bandi (Northwest Missouri State university)
- 4. Using Machine Learning Techniques to Detect Network Intrusions**  
Cheryl Hinds and Jawaan Clifton (Norfolk State University)

**3:00 p.m. – 3:30 p.m. COFFEE BREAK (Bayside Room)**

**SESSION 3**

**SECURITY AND NETWORKING**

Monday, March 17, 3:30 p.m. – 5:00 p.m.

Session Chair: Reshmi Mitra (Southeast Missouri State University, MO, USA)

Location: Plaza Ballroom I

- 1. A Novel Feature Selection Method for Classification Against Email Phishing**  
Sankofa Benzo and Tirthankar Ghosh (University of New Haven)
- 2. Reputation Proof with Load Services in Ad-hoc Peer-to-Peer Networks**  
Ming-Chang Huang (University of North Carolina at Charlotte)
- 3. Scalable Automated Vulnerability Inspection Framework Using Nmap for CVE Detection in Distributed Remote Networks**  
Saurav Ghosh, Reshmi Mitra, Lindsey Redington, and Prasad Dama (Southeast Missouri State University)
- 4. Clustering of Processing-Induced Martensitic Phases Using AC-GAN and Magnetic Susceptibility Evaluation in High-Gradient Fields**  
Takashi Ohnishi (Magnetec Japan Ltd., Japan) and Keiichi Watanuki (Saitama university)

***Tuesday, March 18, 2025***

**7:30 a.m. – 8:00 a.m.**

**REGISTRATION – Coffee, tea, pastries  
Bayside Room**

**8:00 a.m. – 9:00 a.m.**

**KEYNOTE SESSION II**

**SPEAKER: Bilal Clarance**

**Director of Engineering Graph Serving Team at Google**

**TOPIC: KNOWLEDGE FOR SEARCH AND AI**

**Location: Plaza Ballroom I**

**9:00 a.m. – 9:30 a.m. COFFEE BREAK: Bayside Room**

**SESSION 4**

**ALGORITHM AND AI - II**

Tuesday, March 18, 9:30 a.m. – 11:30 a.m.

Session Chair: Ajay Bandi (Northwest Missouri State University, MO, USA)

Location: Plaza Ballroom I

1. **Chain Table: Protecting Table-Level Data Integrity by Digital Ledger Technology**  
Feng Yu, Ryan Laird (Youngstown State University)
2. **Sentiment, Volume, and Topics in University Tweets: Methodology, Insights, and Challenges**  
Alina Campan, Traian Marius Truta, and Anushka Karki (Northern Kentucky University)
3. **Automated Test Case Generation for Software Testing Using Generative AI**  
Ajay Bandi (Northwest Missouri State University) Harsha Sai Teja Nukala, Bhavya Tatavarthi, Amulya Boggavarapu
4. **Ensemble Machine Learning Approach to Phishing Website Detection**  
Divine Precious-Esue, Janit Rajkarnikar, Brian Bellrose, Kritika Upadhyay, and Nick Rahimi (University of Southern Mississippi)
5. **Human Activity Recognition using an Ensemble Learning Approach**  
Tomas Nader, Nick Rahimi, and Saydul Akbar Murad (University of Southern Mississippi)

**11:30 a.m. - 12:30 p.m. (Lunch break)**

**SESSION 5**

**ALGORITHM AND AI - III**

Tuesday, March 18, 12:30 p.m. – 1:00 p.m.

Session Chair: Narayan Debnath (Eastern International University, Vietnam)

Location: Plaza Ballroom I

1. **Comparison of Some Pseudorandom Binary Generators Based on Combinatorial Functions**  
Andrés Francisco Farías (National University of La Rioja, Argentina), Narayan Debnath, Antonio Montejano Montejano, Ana Garis(Universidad de San Luis), Andrés Alejandro Farías(Universidad de La Rioja), and Daniel Riesco (Universidad de San Luis)
2. **Design Process of a New Pseudorandom Binary Generator Model**  
Andrés Francisco Farías (National University of La Rioja, Argentina), Narayan Debnath, German Montejano, Daniel Riesco, Ana Garis(Universidad de San Luis), and Andrés Alejandro Farías(Universidad de La Rioja)