

40th 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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40th International Conference on Computers And Their Applications (CATA 2025)

SPONSOR

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Program at a Glance (All times in PDT)

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

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

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 (Northwest Missouri State university, MO, USA)

12:00 p.m. – 1:30 p.m. CONFERENCE LUNCHEON

Location: Bayside Room

SESSION 2

MACHINE LEARNING AND DATA MINING

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

Session Chair:

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:

Location: Plaza Ballroom I

- 1. A Novel Feature Selection Method for Classification Against Email Phishing**
Tirthankar Ghosh, Murtadha Almakki and Sankofa Benzo (Northern Kentucky University)
- 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 Clarence

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:

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)
- 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.

Best Paper Award Announcement (Lunch break)

SESSION 5

ALGORITHM AND AI - III

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

Session Chair:

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)