

## Agenda - Future Technologies Conference (FTC) 2025

6-7 November 2025 | Munich, Germany



TIME (Munich) CET/UTC+1	Thu Nov 6	Fri Nov 7
09:00 AM - 09:30 AM	Delegates Login	Delegates Login
09:30 AM - 11:00 AM	Opening + Keynote Talks  • Mario Trapp, Fraunhofer IKS  • Torsten Schön, Technische Hochschule Ingolstadt	<ul><li>Keynote Talks</li><li>Wojciech Samek, TU Berlin</li><li>Gitta Kutyniok, Ludwig-Maximilians-Universität</li></ul>
11:00 AM - 11:30 AM	Break	Break
11:30 AM - 12:30 PM	Paper Presentations <ul><li>Session 1: Smart Healthcare</li><li>Session 2: Computing</li><li>Session 3: e-Learning</li></ul>	Paper Presentations <ul><li>Session 10: Computer Vision</li><li>Session 11: Artificial Intelligence</li><li>Session 12: Security</li></ul>
12:30 PM - 01:30 PM	Lunch Break	Lunch Break
01:30 PM - 03:15 PM	Paper Presentations <ul><li>Session 4: Internet of Things</li><li>Session 5: Data Science</li><li>Session 6: e-Learning</li></ul>	Paper Presentations <ul><li>Session 13: Deep Learning</li><li>Session 14: Data Science</li><li>Session 15: Digital Transformation</li></ul>
03:15 PM - 03:30 PM	Break	Break
03:30 PM - 04:30 PM	Paper Presentations <ul><li>Session 7: Smart Healthcare</li><li>Session 8: Computing</li><li>Session 9: e-Learning</li></ul>	Paper Presentations <ul><li>Session 16: Computer Vision</li><li>Session 17: Artificial Intelligence</li><li>Session 18: Security</li></ul>
04:30 PM Onwards		Conference Closing

### Future Technologies Conference 2025 Day 1 - November 6, 2025

Session 1: Smart Healthcare	Session 2: Computing	Session 3: e-Learning
November 6   11:30 AM - 12:30 PM	November 6   11:30 AM - 12:30 PM	November 6   11:30 AM - 12:30 PM
332 - Higher-Order Adaptive Dynamical System Modelling of the Role of Epigenetics in Type 2 Diabetes Mellitus (Jan Treur)  340 - Analysis of the Epigenetics Leading to Inflammatory Bowel Disease Using an Adaptive Self-Modeling Network (Jan Treur)  300 - Vision Transformer-Based Fine-Tuned SAM for Enhanced Bariatric Surgery Image Segmentation (Mostafa D. Rahbar)  21 - Interactive Design Strategies to Alleviate Children's Health Care Anxiety (Chia-yin Yu)  96 - Well-Being Support System in Robotics (Bertrand Fache)	171 - Auto-Configuration of the Constructor Research Platform (Ekaterina Trofimova)  112 -The Relationship of Software Complexity and Understandability (James Helfrich)  333 - Enhancing Cloud Computing Performance with Ant Colony Optimization for Load Balancing (Suresh Sankaranarayanan)  36 - Cloud-Based Framework for Knowledge Sharing in Saudi Arabia's HEIs (AbdulRahman Alsaif)  42 - Reducing Social Isolation and Solitary Deaths with Al-Powered Conversational Companions (Yiejun Yi)	117 - Guides and Tellers: A Review of Tutoring Behaviours (Przemyslaw Pawluk) 262 - The Future of Grading: Can LLMs Accurately Score Student Work? (Zenun Kastrati) 48 - Navigating the Challenges of Large Language Models in Construction Education in South Africa: Balancing Innovation and Adoption (Clinton Aigbavboa) 137 - Embedded Interactive Cubes for STEAM Education (Luis Javier Serpa Andrade) 201 - Design and Implementation of an ESP32-Based Interactive STEM Module to Enhance Mathematical and Renewable Energy Understanding in Early Learning (Luis Javier Serpa Andrade)

#### Session 4: Internet of Things November 6 | 01:30 PM - 03:15 PM

- 308 WiFind: Context-Aware Survivor Localization and Pose Estimation Through Obstacles Using Wi-Fi Channel State Information (Nayel Rehman)
- 233 Acoustic Localization and Voice User Interfaces for Robotic Furniture (John Finberg)
- 286 FIRE: Fog-Based Intrusion Detection Framework for Real-time Security in IoT Environments (Bradley Boswell)
- 12 Viability of Electric Vehicle Adoption in Outbound Logistics (Omid Fatahi Valilai)
- 58 Opportunities for Internet of Things (IoT) Adoption in Construction Demolition Waste Management in Developing Nations: Professionals' Perspectives (Clinton Aigbayboa)
- 52 Identifying Al Technologies Utilized in the Planning Phase of Construction Projects (Clinton Aigbavboa)
- 92 Contractors of the Future: Integrating Internet of Things and 3D Printing in the Liberian Construction Industry (Clinton Aigbavboa)
- 108 Trickle-E: Enhanced Trickle Timer with Residual Energy Consideration (Boulou Mahamadi)

# Session 5: Data Science November 6 | 01:30 PM - 03:15 PM

- 32 The Shape of Data: How Classification Constructs the Digital World? (Peggy Bloomer)
- 130 Factors Influencing School Dropout (Yaimara Cespedes)
- 40 Automated Test Case Generation from Natural Language Requirements Using Large Language Models (Ouafae Karmouda)
- 87 Harnessing AI to Predict Lower Limb Varicose Veins (Nadia Salem)
- 51 Evaluation of Demand Forecasting Algorithms in the Food Industry (Kevin P. Toapanta)
- 151 Benchmarking Akan ASR Models Across Domain-Specific Datasets (Mark Atta Mensah)
- 206 Predicting MOOC Student Success Using Aggregated Behavioral Features and Machine Learning Under the CRISP-ML(Q) Framework (Henry Nelson Roa Marin)
- 309 Natural Language Processing Applied to Emotion Analysis for Continuous Improvement in Industrial Environments (Ana Alvarez Sanchez)

# Session 6: e-Learning November 6 | 01:30 PM - 03:15 PM

- 63 K-12 Virtual Reality in STEM (Diane Guevara)
- 84 Comparing AI and Human Self-Assessments in Memorization Performance (Meg Ermer)
- 80 Enhancing Motivation in English for Specific Purpose Learning (Iva Grubjesic)
- 136 Adaptive Learning Systems in Higher Education: Challenges, Trends, and Outcomes (Andrija Bernik)
- 126 Design and Implementation of a Real-Time Audio Spectrum Analyzer Based on ESP32 with Distributed Processing and Web Visualization (Luis Javier Serpa Andrade)
- 317 Virtual Inclusion in Distance Education: Challenges and Opportunities for Embracing Student Diversity (Pablo Alejandro Quezada Sarmiento)
- 338 Neuroeducation as a Pillar of Inclusion: The Application of Cognitive Science in Inclusive Pedagogy (Aracelly Fernanda Núñez Naranjo)
- 25 Proposal for Multisensory Recreational Rooms Based on Embedded Systems and Centralized Communication (Luis Javier Serpa Andrade)

Session 7: Smart Healthcare	Session 8: Computing	Session 9: e-Learning
November 6   03:30 PM - 04:30 PM	November 6   03:30 PM - 04:30 PM	November 6   03:30 PM - 04:30 PM
268 - Identifying Abnormalities in Heart Sound Data Using Machine Learning with Interpretability (Surya Pothuri) 110 - CNN-Based Classification of Lung Diseases in Chest X-Ray Images (Maha Zayoud) 238 - CAN-Based Communication Interface for Industrial Servomotor Control in a Biomimetic Transhumeral Prosthesis (Luis Javier Serpa Andrade) 267 - Ontology for the Representation of Information on the SARS-CoV-2 Pandemic (Ana Laura Lezama Sanchez)	85 - Evaluating Hyper-V vs. Proxmox: Performance Comparison for Virtualization (Ivan Vakal) 116 - Enhancing Data Collection for Humanitarian Demining (Oleksandr Zarytskyi) 225 - Assessing the Viability of Quantum SAT Solvers: A Comparative Study Using Grover's Algorithm and Quantum Hardware (Higinio Mora) 274 - TCAD-SPICE Analysis of SEU and Reliability in Space- Grade SRAM from 90 nm to 28 nm (Igor A. Kharitonov) 329 - The Landscape of Quantum Computing Education in South Africa: Lessons from Global Practices (Laing Lourens)	11 - Exploring the Impact of Al-Powered Educational Technologies on English Language Proficiency (Zahra Zohair Arab) 212 - Tuition Class Management System (Check-Yee Law) 8 - Enhancing Assessments in Engineering and Construction Education Through Student-Generated Podcasts (Douglas Aghimien) 43 - Korean Pronunciation Correction Web Application for the Hearing Impaired and Foreigners (Sangyoon Jung) 55 - Advancing STEM Learning in the New Normal: An Educational Mobile Game for Senior High School Students (Leonila B. Valdez)

### Future Technologies Conference 2025 Day 2 - November 7, 2025

Session 11: Artificial Intelligence

**Session 12: Security** 

**Session 10: Computer Vision** 

November 7   11:30 AM - 12:30 PM	November 7   11:30 AM - 12:30 PM	November 7   11:30 AM - 12:30 PM
188 - Automated Drone Image Analysis for Real-Time Disaster Response and Emergency Situations (Noam	140 - Device First Continuum AI (DFC-AI): Realizing Human-Like AI (Siavash Alamouti)	14 - Using the NFT Architecture to Protect Intellectual Property in 3D Printing Ecosystems (Omid Fatahi Valilai)
Nedivi) 34 - Intelligent Communication: Concepts, Technologies,	59 - Mapping Digital Twin Technology Research Trends for Infrastructure Development in Emerging Economies	28 - Computational Attestations of Polynomial Integrity Towards Verifiable Back-Propagation (Dustin Ray)
Challenges (Ivanka Valova) 97 - Optimizing Edge Capacities in Flow Networks Using	(Clinton Aigbavboa) 69 - Al-Driven Quality Control in the Built Environment: A	276 - Secure Code Generation with Parameter-Efficient Fine- Tuning of LLMs (Md Anwarul Hasan)
Moth-Flame Optimization Integrated with Ford-Fulkerson (Lama Sadi Awad)	Machine Learning and Expert System Approach (Clinton Aigbavboa)	57 - Cloud-Based Project Information Management System Adoption (Clinton Aigbavboa)
111 - Real-Time Image Processing Based Spy Camera Detection System for Enhanced Privacy and Security (Maha	76 - Enhancing Workplace Well-Being with AI (Rakshitha Murali)	98 - Cryptocurrency Transactions in the Construction Industry: Trends and Security Implications (Clinton
Zayoud)	82 - Strategies for Fair Machine Learning Applications in the South African Construction (Clinton Aigbavboa)	Aigbavboa)
185 - A Review of Studies on Museum Information Design Based on VR and AR in China (Zhiyong Wang)		104 - How Zero Trust Reduces Cyber Risks and Lowers Cyber Insurance Premiums (Yuri Bobbert)

Session 13	3: Deep	Learning
ovember 7 l	01:30 PI	M - 03·15 PM

Session 14: Data Science
November 7 | 01:30 PM - 03:15 PM

## Session 15: Digital Transformation November 7 | 01:30 PM - 03:15 PM

- 163 AlJIM: A Scalable Model for Real-Time Al in Environmental Journalism (Torsten Tiltack)
- 190 Performance and Self-Evaluation of Free-Access Large Language Model Chatbots: A Multi-Metric Comparative Study (Khaled Slhoub)
- 75 Human Vision Inspired Integration of Visual Saliency Maps and Deep Learning for Accurate and Efficient Cardiac Structure Detection (Racheal Mukisa)
- 301 Energy Optimization Using Neural Networks (Michal Hodon)
- 120 Machine Learning and Deep Learning for Botnet Detection Techniques: A Comparative Review (Lama Sadi Awad)
- 162 Deep Learning Based Real Time Traffic Monitoring and Vehicle Tracking (Yehia Kotb)
- 217 Graph Neural Network Based Dangerous Goods Transportation in Smart Cities (Yehia Kotb)
- 322 ARCANET: Intelligent Audio Copyright Detection with Wavelet Transforms and LSTMs (Pranjali Talanki)

- 231 Accelerated Policy Convergence via Knowledge Dissemination and Computational Optimization (Rami Alroobi)
- 236 From User Intent to Product: Enhancing Auto-Completion with Knowledge Graphs in Industrial Computing Domain (Ilham Supriyanto)
- 237 Temperature Forecasting on the Jena Climate Dataset Using SARIMA and Box-Jenkins Models (Jafari Reza)
- 277 A Confidence-Interval Circular Intuitionistic Fuzzy Model for Evaluating Early-Career Academic Staff Productivity in STEM Higher Education (Velichka Traneva)
- 38 A Knowledge Management System for Capturing and Reusing Best Practices in Learning Design: A Pilot Study (Mohammed Alsharidah)
- 241 Towards Operational Efficiency: CRM
  Parameterization in Mobile Telecom Maintenance (Jorge Osmani Ordoñez-Ordoñez)
- 269 Non-Invasive Detection of Moisture in Meat Tissue Using S-Parameters of Microstrip Antennas (Nathalia A. Chacón-Reino)

- 13 An Integration of Blockchain Technology in the Supplier Selection Process (Omid Fatahi Valilai)
- 79 Impact of Social Media Advertising on Functional Food Purchase Intention (Nguyen Thi Phuong Giang)
- 88 Factors Influencing the Use of Digital Technologies for Cost and Time Efficiency in Modular Construction (Clinton Aigbavboa)
- 61 Risk Associated with Digitalization in the Construction Industry: A Bibliometric Review of Present and Future Trends (Clinton Aigbavboa)
- 62 Measures to Improve the Adoption of 4IR Technologies in the South African Construction Industry (Clinton Aigbavboa)
- 66 Advancing Skills for the Construction Industry in the Era of 4IR: A Bibliometric Analysis (Clinton Aigbavboa)
- 132 CAMS-F: Extending the Context-Aware Mobile System Framework for Cross-Platform Development with Flutter, Firebase, and Google Maps (Estevan Gomez-Torres)
- 244 ASD and LRFD Under Gravity- and Seismic-Dominated Loads (Jonnathan Dario Santos Benitez)

## Session 16: Computer Vision November 7 | 03:30 PM - 04:30 PM

- 287 Adversarial Pattern Identification in Face Recognition System (Amisha Bagri)
- 304 DDG: Detecting Deceptive Gait Walk Based on Videos (Lavanya Srinivasan)
- 291 Apple Leaf Disease Detection: A Comprehensive Analysis of Pre-Trained Models and Platform Development (Masoud Shakiba)
- 331 Removing Unwanted Objects from Image/Frame by Generating Sub-Images Through Generative Adversarial Network (Roya Choupani)
- 302 Interfaces and Usability in Digital Flight Logs: Applied Design in the Aeronautical Context (Ana Alvarez Sanchez)

#### Session 17: Artificial Intelligence November 7 | 03:30 PM - 04:30 PM

- 146 Exploring Artificial Intelligence Capabilities in the Detection and Classification of Prehistoric Rock Art Paintings (Sandra Jardim)
- 279 Contemporary Stochastic Methods for Comprehensive Sensitivity Analysis (Stoyan Tranev)
- 248 Learning from Events: A Synergistic Approach to Complex Event Processing and Machine Learning (Philip Wright)
- 1 Comparative Study Among pix2pix, pix2pixHD and pix2pixHD+ for Conversion of SAR Images to Optical Images in Application of Disaster Area Detection (Kohei Arai)
- 227 Method for Tea Leaf Plucking Timing Prediction with Budding Tea Leaf Detection Based on YOLO11 (Kohei Arai)
- 205 Al-Powered Predictive Maintenance in Oil and Gas: Maximizing Efficiency and Profitability (Eldar Mardanov)

# **Session 18: Security**November 7 | 03:30 PM - 04:30 PM

- 297 Hybrid Insight: A Static-Dynamic Random Forest Framework for Detecting Obfuscated Android Malware (Jizhou Tong)
- 321 Computational Analysis of Cascade Cyber Risk Management in Student Admissions Processes (Jan Treur)
- 337 Developing the Cybersecurity Sectoral Risk Index (Jan Treur)
- 339 Computational Analysis of the KnowBe4 Identity Fraud Case by a Multi-Adaptive Dynamical System Model (Jan Treur)
- 30 Categories of Creativity Empirically Identified from Virtual 3D Worlds (Petr Klán)