



# 1st National Conference on Advanced Transportation Engineering, Logistics, and Environment (NCATELE'24)

*November 27 & 28, 2024*

*Constantine, Algeria*

# *Conference Program*

Organised by  
University Constantine 1 frères Mentouri  
Faculty of science and technology  
Transportation engineering department  
Laboratory of Transportation Engineering and Environment (LITE)

First version

# Introduction

The University of Constantine 1, through the Faculty of Technology Sciences, is organizing the First National Conference on Advanced Transportation Engineering, Logistics, and Environment (NCATELE'24), to be held in Constantine, Algeria, from November 27 to 28, 2024. The conference aims to present the latest advancements and research findings in Transport Engineering, Logistics, the transport of hydrocarbons via electric traction, and Industrial Safety.

This event invites contributions from researchers, academics, engineers, and professionals worldwide to showcase their most recent research developments. Contributions are encouraged through the submission of articles that highlight research outcomes, projects, synthesis work, and industrial applications. The purpose of the conference is to review the main current concerns in applied Transportation Engineering, Logistics, and Environmental sciences, and promote the exchange of experience and knowledge among national researchers. The conference also aims to identify prominent themes, from the design and functionalization of engineering science to innovative applications. The scientific program will feature a keynote address, oral presentations, and poster sessions.

## MAIN TOPICS

We welcome high-quality contributions from a broad range of topics related to, but not limited to, the following areas:

- Topic 1 : Transportation Engineering
- Topic 2 : Logistics and Supply chain management
- Topic 3 : Electrical Traction
- Topic 4 : Transport and Distribution of Hydrocarbons
- Topic 5 : Industrial Hygiene and Safety

## *Wednesday 27, November 2024*

<b>08h00 – 09h00</b>	<b>Registration</b>
<b>09h00 – 09h45</b>	<b>Opening and Welcome Ceremony</b>  <b>Welcoming speech of Pr. Ahmed BOURAS the honorary president of the conference</b>  <b>Welcoming speech of Pr. Abderraouf MESSAI the vice honorary president of the conference</b>
<b>09h45 – 10h00</b>	<b>Coffee Break</b>
<b>10h00 – 10h40</b>	<b>Keynote Speaker 1: Prof. Mohamed Salah BOULAHLIB</b> <b>« Future Transport »</b>
<b>10h45 – 11h25</b>	<b>Keynote Speaker 2: SETRAM Company</b> <b>« Operating the Constantine tramway: reality and future challenges »</b>
<b>12h00 – 13h00</b>	<b>Lunch break</b>
<b>Oral session (parallel session)</b>	
<b>Room 1</b> <b>Topic: Transportation Engineering, Logistics and Supply Chain Management</b> <b>President: Prof. Ahmed BELLAOUAR</b> <b>With: Dr. F. BOUDJELLE and Dr. Meriem BENSOUYAD</b>	
<b>13h00 – 13h15</b>	Integrating Lean Manufacturing Principles into Supply Chain Management for Enhanced Efficiency and Agility <b>Author : Hasna Meddour</b>
<b>13h15 – 13h30</b>	Traffic Congestion Management Strategies using an ANP-based Multi-Criteria Decision Approach <b>Author : Wafa Boulagouas</b>
<b>13h30 – 13h45</b>	Integrating GIS into Public Transport Management: Case Study of The City of Mascara <b>Author : Bouchentouf Ikrame</b>
<b>13h45 – 14h00</b>	Maximization of profit in lot sizing problem with pricing and time windows <b>Author : Bahia Boultif</b>
<b>14h00 – 14h15</b>	Solar Energy Integration in Sustainable Urban Transportation: Enhancing Efficiency in Mobility Systems <b>Author : Soundesse Guettala</b>
<b>14h15 – 14h30</b>	Impact of supply chain management regarding building materials sourcing on energy consumption of detached houses in hot arid regions <b>Author : Sara Ouanes</b>
<b>Room 2</b> <b>Topic: Electrical Traction</b> <b>President: Prof. Mohamed BENIDIR</b> <b>With Dr. H. CHERRID and Dr. K. ALLALI</b>	
<b>13h00 – 13h15</b>	Optimizing Railway Electrical Systems through Fuzzy Logic Control for Harmonic Distortion Mitigation <b>Author : Meryem Aissaoui</b>
<b>13h15 – 13h30</b>	Optimal Planning of PV Sources in MVDC Grid Considering Railway Electrical Traction System Using Recent Optimization Algorithms <b>Author : Zellagui Mohamed</b>
<b>13h30 – 13h45</b>	On-board Hybrid Energy Storage Systems for Regenerative Braking Energy Recovery in DC Electrified Urban Railway Systems <b>Author : Fawzia Berroum</b>
<b>13h45 – 14h00</b>	Intelligent Speed Optimization of electric vehicle: Utilizing PWM and Buck Converter <b>Author : Hamed Kamel Zine</b>

<b>Room 3</b> <b>Topic: Transport and Distribution of Hydrocarbons</b> <b>President: Prof Omar KHOLAI</b> <b>With Dr. M. CHEKIRED And Dr. L. BOUSSALIA</b>	
<b>13h00 – 13h15</b>	Étude numérique du transfert de chaleur dans des solutions de bentonite non-newtoniennes sous écoulement <b>Author : Abdel Hakim Kherief Nacereddine</b>
<b>13h15 – 13h30</b>	Numerical Modeling of transient flow in water pipeline transportation <b>Author : Mohamed Hassani</b>
<b>13h30 – 13h45</b>	Experimental study of weld repair effect on hardness variation <b>Author : Mohamed Benamira</b>
<b>Room 4</b> <b>Topic: Industrial Hygiene and Safety</b> <b>President: Dr. Ahcene AKNI</b> <b>With : Dr. N. AZZAM and Dr. S. BELHOUR</b>	
<b>13h00 – 13h15</b>	Heterogeneously degradation of Amoxicillin in aqueous solution by UV/TiO <sub>2</sub> System in the Presence of the Electron Acceptors Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> and H <sub>2</sub> O <sub>2</sub> <b>Author : Meriem Akkrar</b>
<b>13h15 – 13h30</b>	Dye Adsorption Investigation Utilizing Activated Carbon Made From Leftover Palm Fiber <b>Author : Mecheri Ahmed Razika</b>
<b>13h30 – 13h45</b>	Examining how local mineral clays can be used to adsorb organic dyes from aqueous solutions <b>Author : Mecheri Ahmed Razika</b>
<b>13h45 – 14h00</b>	Exploring the Intersection of Psychosocial Well-Being and Operational Safety in Industrial Settings <b>Author : Amira Zadem</b>
<b>14h00 – 14h15</b>	Application of Univariate Control Charts for Assessing Risk Associated with Steel Gas Pipelines Near the Constantine Tramway- A Case Study <b>Author : Karim Khattab</b>
<b>14h30 – 14h45</b>	<b>Coffee Break</b>
<b>14h30 -15h45</b> <b>Poster session</b> <b>President: Prof. Ramdane BOUZERARA</b> <b>With : Dr. A. LEBIED and Dr. R. ZELLAGUI</b>	
Adaptive fixed-time command filtered backstepping control for uncertain nonlinear strict-feedback systems <b>Author : Yassine Soukkou</b>	
Tuning functions-based adaptive backstepping control of high-order uncertain output constrained nonlinear strict-feedback systems <b>Author : Yassine Soukkou</b>	
Finite-time command filtering-based adaptive backstepping control for uncertain nonlinear strict-feedback systems <b>Author : Yassine Soukkou</b>	
Toward Enhanced Maintenance through the Maintenance Audit Method <b>Author : Houssam Lala</b>	
Sustainable supply chain management and key differences between Manufacturing and Service sectors: A literature review <b>Author : Rania Berrachedi</b>	
Optimization of Energy Consumption in Electrified Vehicle Powertrains by Technical Factors <b>Author : Meryem Noui</b>	
Optimizing Energy Management in Hydrogen Fuel Cell-Based Electric Transportation Systems <b>Author : Imen Mammeri</b>	
Contribution à l'évaluation des facteurs de risque d'un accident routier au travail : Cas de l' HESP <b>Author : Yamina Heddar</b>	
Analysis of Simulation Models Based on Multi-Agent Systems and Their Impact on the Performance of a Production Supply Chain <b>Author : Meroua Sahraoui</b>	
Towards reducing travel time and traffic congestion in a network: Integrating SUMO and fuzzy logic <b>Author : Fatma Zohra Djekrif</b>	

Contribution to induction motor control for electric traction based on intelligent techniques <b>Author : Raid Raid zairi</b>
Optimizing Route Management for Efficient Parcel Collection and Delivery <b>Author : Mohamedelkhalil Latreche</b>
Assessing Women's Comfort in Public Transportation in Algeria <b>Author : Meriem Far</b>

## Thursday 28, November 2024

<b>08h30 – 09h10</b>	<b>Keynote Speaker 3 Prof. Rachid CHAIB</b> <b>« Prevention, health and safety at work: Chemical products »</b>
<b>09h15 –09h50</b>	<b>Keynote Speaker 4 .....</b> <b>“ .....”</b>
<b>09h50-10h15</b>	<b>Coffee Break</b>
<b>09h50-10h45</b> <b>Poster Session</b> <b>President: Dr. Abdelaziz LEBIED</b> <b>With Dr. F. GUERDOUH and Dr. M. BENZITOUNI</b>	
Approches de Modélisation des Chaînes Logistique : Etat de l'art <b>Author : Nassima Bounadi</b>	
Computational CFD of multiphase flow in T-junction <b>Author : Laalaibia Imene</b>	
Methods and Strategies for Optimized Return Management in Reverse Logistics <b>Author : Benhamma Fahima</b>	
Flow Stability in Core Annular Flow (CAF) for Heavy Oil Transport: A CFD Study on the Impact of Multiple Water Inlets <b>Author : Rima Klaa</b>	
Effect of heavy oil/water density ratio on Core Annular Flow stability <b>Author : Karima Benotmane</b>	
The effect of leak height in storage tanks on toxic dispersion. Case study <b>Author : Belaid Dalila</b>	
Artificial Intelligence-Based Optimization of Welding Process Parameters for Improved Precision and Quality <b>Author : Mohammed Haddad</b>	
Optimization of Urban Parking Systems: An Analytical Approach and Case Study Application Noureddine Azzem	
Connecting Decentralized Photovoltaic Power Plants for Direct Injection into Tramway Transportation System in Constantine, Algeria. <b>Author : Saddam Hocine Zemmit</b>	
Development of a simplified procedure adapted to the context of the study of the Algerian transport and road traffic plan <b>Author : Sofiane Chorfi</b>	
Aromatic hydrocarbon tank explosion effects Identification: A contribution to sustainable safety <b>Author : Amel Hammouya</b>	
Qualitative Evaluation of Constantine Airport (Algeria): Understanding Reality and Addressing Future Challenges <b>Author : Farida MEROUANI</b>	
Aerodrome Traffic Assessment Before and After COVID-19 at Algerian Airports: A Case Study of Constantine Airport <b>Author : Maissoun KALKOUL</b>	
Effects of Speed, Acceleration and Braking on Fuel Consumption: Driving Simulator Study <b>Author : Lina Meddour</b>	

## Oral session (parallel session)

### Room 1

**Topic: Transportation Engineering, Logistics and Supply Chain Management**

**President: Prof. Salim BOUKEBBEB**

**With: Dr. A. BOUAFIA and Dr. M. KHELFI**

<b>10h45 – 11h00</b>	Transforming Warehouse Operations: Insights from Recent Technological Advancements <b>Author : Khaoula Sahraoui</b>
<b>11h00 – 11h15</b>	Vehicle-To-Vehicle Communication Using Li-Fi for Smart Cities <b>Author : Abdesselam Babouri</b>
<b>11h15 – 11h30</b>	Experimental Validation of Roadside Infrastructure-to-Vehicle Visible Light Communication for Safety and Efficiency in Intelligent Transportation Systems <b>Author : Abdesselam Babouri</b>
<b>11h30 – 11h45</b>	Cost Analysis for a Hybrid Renewable Energy System Connected to the Grid Based on Grey Wolf Optimization <b>Author : Oussama Belhadef</b>

### Room 2

**Topic: Electrical Traction**

**President: Prof. Ramdane BOUZERARA**

**With Dr. F. MESSAI and Dr. F. KENDOULI**

<b>10h45 – 11h00</b>	Enhancing Power System Efficiency for Electric Traction: OPF Optimization on the Algerian 114-Bus System. <b>Author : Imadeddine - Benhabsa</b>
<b>11h00 – 11h15</b>	Voltage-Sensorless Direct Power Control for a Grid Connected Rectifier Using Kalman Filter <b>Author : Houssam Eddine Medouce</b>
<b>11h15 – 11h30</b>	Integration of Electric Vehicle Charging Stations with D-STATCOM Compensation <b>Author : Mohamed Amir Labeled</b>
<b>11h30 – 11h45</b>	A Modified Bridgeless SEPIC PFC Converter for Power Quality Enhancement in Arc Welding Power Supplies <b>Author : Nouredine Hamouda</b>

### Room 3

**Topic: Industrial Hygiene and Safety**

**President: Dr. Hafida KAHOUL**

**With : Dr. A. KAHLOUCHE and Dr. S. BACHA**

<b>10h45 – 11h00</b>	Integrating HAZOP and PHAST for Enhanced Risk Management in Petrochemical Operations: A Case Study on Separation Vessel – RA1K Skikda <b>Author : Wafia Benhamlaoui</b>
<b>11h00 – 11h15</b>	Cationic dyes and the use of pre-treated red clay in the adsorption of real textile wastewater <b>Author : Amina Bouguerra</b>
<b>11h15 – 11h30</b>	Dynamic Reliability Assessment Using Dynamic Bayesian Network: Case Study <b>Author : Mohammed Bougofa</b>
<b>11h30 – 11h45</b>	Assessment of Safety Integrity Levels in Critical Loops at an Algerian Refinery: A Comparative Study <b>Author : Amin Baziz</b>
<b>11h45 – 12h00</b>	Effects of Perceived Patient Safety Culture on Healthcare Professionals: A Cross-Sectional Analysis in an Algerian Hospital <b>Author : Amin Baziz</b>

<b>Room 4</b> <b>Topic: Industrial Hygiene and Safety</b> <b>President: Dr. Linda BOUYAYA</b> <b>With : Dr. Y. BENJOUDI and Dr. S. BELEULMI</b>	
<b>10h45 – 11h00</b>	The Use of Experience Feedback as a Tool for Improving Safety in Companies. <b>Author : Ghania Rahmani</b>
<b>11h00 – 11h15</b>	Optimizing Process Quality in Submerged Arc Welding: AI-Based Parameter Optimization with Human-Inspired Algorithm <b>Author : Badis Lekouaghet</b>
<b>11h15 – 11h30</b>	Human Reliability Analysis during Triennial Inspection of Balloons applying SPAR-H method <b>Author : Alaeddine Boulekouas</b>
<b>11h30 – 11h45</b>	Valorization of biomaterials and their applications as coagulants/flocculants in turbid water treatment <b>Author : Dahbia Cheriet</b>
<b>11h45 – 12h00</b>	Wastewater treatment using plant-derived bioflocculants: green chemistry approach for safe environment <b>Author : Dahbia Cheriet</b>
<b>12h00 – 12h15</b>	Contributions to the analysis of the main failures of an industrial system (industrial fan) <b>Author : Amel Hammouya</b>
<b>Cloture event &amp; Lunch break</b>	