

## International Conference on Artificial Intelligence and Smart Vehicle (ICAISV-2023) Department of Mathematics and Computer Science Amirkabir University of Technology Tehran, Iran



https://aismartvehicle.aut.ac.ir/

| Bahman Hall (Central Amphitheater of Amirkabir University of Technology) https://meetings2.aut.ac.ir/smart1/ 11:30-12:30  Session 2 Hybrid  Time Topic Presenter(s) 11:30-11:50  Clustering of Urban Traffic Patterns by K-Means and Dynamic Time Warping: Case Study  A Saturation Modification Image Enhancement Method for Low Light Color Images  11:50-12:10  A Saturation Modification Image Enhancement Method for Low Light Color Images  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Network Mogel and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A li Besharati Ali Nahvi Serajeddin Ebrahimian  Donine vehicle detection using gated recurrent units  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A li Besharati Ali Nahvi Serajeddin Ebrahimian  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A li Besharati Ali Nahvi Serajeddin Ebrahimian  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A li Besharati Ali Nahvi Serajeddin Ebrahimian  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A li Besharati Ali Nahvi Serajeddin Ebrahimian  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Network Model Neural Network Model Neural Network Model Neural Network Model Neu | Wednesday (May, 24) |  |                      |   |                                   |                             |                                |  |  |
|--|---------------------|--|----------------------|---|-----------------------------------|-----------------------------|--------------------------------|--|--|
| 8:00-9:00 Reception (Physical) 9:00-11:00 Welcome Session 1 (Physical) with Industry and Academic Invited Speakers Academic & Industrial Talks 11:00-11:30 Break-1    Bahman Hall (Central Amphitheater of Amirkabir University of Technology) https://meetings2.aut.ac.ir/smart1/ University of Technology) https://meetings2.aut.ac.ir/smart1/ University of Technology) https://meetings2.aut.ac.ir/smart2/ Session 3 Session 4 Hybrid Hybrid Hybrid Hybrid    Time   |                     |  |                      |   |                                   |                             |                                |  |  |
| 9:00-11:00 Welcome Session 1 (Physical) with Industry and Academic Invited Speakers    Bahman Hall (Central Amphitheater of Amirkabir University of Technology)  | Time                |  | То                   | pic   |                                   | Presenter                   |                                |  |  |
| Bahman Hall (Central Amphitheater of Amirkabir University of Technology) https://meetings2.aut.ac.ir/smart1/ 11:30-12:30  Session 2 Hybrid  Time Topic Presenter(s) 11:30-11:50  Clustering of Urban Traffic Patterns by K-Means and Dynamic Time Warping: Case Study  A Saturation Modification Image Enhancement Method for Low Light Color Images  11:50-12:10  A Saturation Modification Image Enhancement Method for Low Light Color Images  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Network Mogel and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A li Besharati Ali Nahvi Serajeddin Ebrahimian  Donine vehicle detection using gated recurrent units  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A li Besharati Ali Nahvi Serajeddin Ebrahimian  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A li Besharati Ali Nahvi Serajeddin Ebrahimian  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A li Besharati Ali Nahvi Serajeddin Ebrahimian  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A li Besharati Ali Nahvi Serajeddin Ebrahimian  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Network Model Neural Network Model Neural Network Model Neural Network Model Neu | 8:00-9:00           |  | Reception (Physical) |   |                                   |                             |                                |  |  |
| Bahman Hall (Central Amphitheater of Amirkabir University of Technology)   | 9:00-11:00          | Welcome Session 1 (Physical) with Industry and Academic Invited Speakers  Academic & Indutrial Talks |                      |   |                                   |                             | rial Talks                     |  |  |
| University of Technology) https://meetings2.aut.ac.ir/smart1/  Session 2 Hybrid  Time Topic Clustering of Urban Traffic Patterns by K-Means and Dynamic Time Warping: Case Study  A Saturation Modification Image Enhancement Method for Low Light Color Images  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A li Nahvi Serajeddin Ebrahimian  University of Technology) https://meetings2.aut.ac.ir/smart2/ https://meetings2.aut.ac.ir/smart2/ https://meetings2.aut.ac.ir/smart2/ https://meetings2.aut.ac.ir/smart3/ Session 3 Hybrid  Presenter(s)  A novel MEC-enabled blockchain-based system A novel MEC-enabled blockchain-based system Shakiba Rajabi Nohammad ali Ghiasi Mohammad al | 11:00-11:30         |  |                      | Break-1   |                                   |                             |                                |  |  |
| Time   Topic   Presenter(s)   Presenter(s)   Topic   Presenter(s)   Presenter(s)   Topic    |                     | University of Technology)  |                      | University of Technology)                               |                                   | Computer Science)           |                                |  |  |
| Clustering of Urban Traffic Patterns by K-Means and Dynamic Time Warping: Case Study  A Saturation Modification Image Enhancement Method for Low Light Color Images  Light Color Images  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Ali Nahvi Serajeddin Ebrahimian  Clustering of Urban Traffic Patterns by K-Means and Baziyeh Mosayebi Tadeh Alexani, et al.  A novel MEC-enabled blockchain-based system architecture for smart vehicles data privacy:  A novel MEC-enabled blockchain-based system architecture for smart vehicles Shakiba Rajabi  A novel MEC-enabled blockchain-based system architecture for smart vehicles data privacy:  Convolutional Neural Network Mohammad ali Ghiasi Mohammad ali         | 11:30-12:30         |  |                      |   |                                   |                             |                                |  |  |
| Patterns by K-Means and Dynamic Time Warping: Case Study  A Saturation Modification Image Enhancement Method for Low Light Color Images  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A Signature of the Convolutional Neural Network and Long Short Term Memory on Inertial Measurement Unit sensors for Gait Phase Detection  Driver Cellphone Usage Scattering and Convolutional Neural Networks  A Signaturation Modification Image Enhancement Method for Low Light Color Images  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A Signaturation Modification Image Enhancement Method for Low Light Color Images  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A Signaturation Modification Image Enhancement Method for Low Light Color Images  Sepideh Khormaeipour Fatemeh Shakeri  Convolutional Neural Network Model  Mohammad ali Ghiasi Mohammad ali Ghiasi Mohammad ali Ghiasi Ali Kamali Egoli et al.  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  Ali Besharati Ali Nahvi Serajeddin Ebrahimian  Online vehicle detection using gated recurrent units  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Network Model  A Faczoo Sedghi Esmat Rashedi Maryam Amoozegar Fatemeh Afsari  How do drivers react after receiving forward collision warnings?  A Pair Kamyab Moghaddam Amirmasoud Hamedi Hamed Emami   | Time                | Topic  | Presenter(s)         | Topic   | Presenter(s)                      | Topic                       | Presenter(s)                   |  |  |
| A Saturation Modification Image Enhancement Method for Low Light Color Images  Light Color Images  Driver Cellphone Usage Detection Using Wavelet Scattering and Convolutional Neural Networks  A Saturation Modification Image Enhancement Method for Low Light Color Images  A Saturation Modification Image Khormaeipour Fatemeh Shakeri  Al Long Short Term Memory on Inertial Measurement Unit sensors for Gait Phase Detection  A Il Mahyi Serajeddin Ebrahimian Detection Using Wavelet Scattering and Convolutional Neural Networks  A Saturation Modification Image Khormaeipour Fatemeh Shakeri  Al Long Short Term Memory on Inertial Measurement Unit sensors for Gait Phase Detection  A Arezoo Sedghi Esmat Rashedi Maryam Amoozegar Fatemeh Afsari  A Morteza Moradi  Amir Kamyab Moghaddam Amirmasoud Hamedi Maryam Amoozegar Fatemeh Afsari  A Morteza Moradi  A Maryam Amoozegar Fatemeh Afsari  | 11:30-11:50         | Patterns by K-Means and<br>Dynamic Time Warping: Case  | Raziyeh Mosayebi     | blockchain-based system architecture for smart vehicles | _                                 | Detection using Supervised  | H.C Taneja                     |  |  |
| Detection Using Wavelet Scattering and Convolutional Neural Networks  Ali Besharati Ali Besharati Ali Nahvi gated recurrent units  Online vehicle detection using gated recurrent units Maryam Amoozegar Fatemeh Afsari  How do drivers react after receiving forward collision warnings?  Moghaddam Amirmasoud Hamedi Hamed Emami   | 11:50-12:10         | Enhancement Method for Low   | Khormaeipour         | and Long Short Term Memory on Inertial Measurement Unit | Mohsen Bahrami<br>AliKamali Egoli | for Quality Control in      | Morteza Moradi                 |  |  |
| 2:30-13:30   | 12:10-12:30         | Detection Using Wavelet<br>Scattering and Convolutional  | Ali Nahvi            | gated recurrent units                                   | Esmat Rashedi<br>Maryam Amoozegar | receiving forward collision | Moghaddam<br>Amirmasoud Hamedi |  |  |
|  | 12:30-13:30         |  |                      |   |                                   |                             |                                |  |  |

| Wednesday (May, 24) |   |                                      |  |   |  |                   |  |  |
|---------------------|---|--------------------------------------|--|---|--|-------------------|--|--|
|                     | Bahman Hall (Central Amphitheater of Amirkabir University of Technology)                |                                      |  |   |  |                   |  |  |
|                     | https://meetings2.aut.ac.ir/smart1/   |                                      |  |   |  |                   |  |  |
| Time                | Topic   |                                      |  |   | Presenter                                      |                   |  |  |
|                     |   |                                      | ion 5  |   |  |                   |  |  |
| 13:00-14:00         |   | Keynote Spee                         |  |   | Dr. Hamzeh Zakeri                              |                   |  |  |
|                     | Smart Roads   |                                      |  |   |  |                   |  |  |
| 44.00.45.00         |   |                                      | ion 6  |   | Dr. Mahdi Rezaei                               |                   |  |  |
| 14:00-15:00         | Local and Global (  | -                                    | ech (Remote):<br>Ision for Pedestrian Intention Pr | odiction  |  |                   |  |  |
| 15:00-15:30         | Local and Global C  | Contextual reatures ru               | Break-2  | ediction  |  |                   |  |  |
| 15.00-15.50         |   | Sess                                 | ion 7  |   |  |                   |  |  |
| 15:30-16:30         | Keynote Speech (Remote):  |                                      |  |   | Dr. Nima Mohajerin                             |                   |  |  |
|                     | Long-Tail Learning and Out-of-Distribution Detection in Autonomous Driving              |                                      |  |   |  |                   |  |  |
|                     | Session 8   |                                      |  |   | Dr. Mohammad Pirani                            |                   |  |  |
| 16:30-17:30         | Keynote Speech (Remote):  |                                      |  |   |  |                   |  |  |
|                     | Resilienc   | e of connected vehicle               | es: a control-theoretic approach                   |   |  |                   |  |  |
| 17:30-17:50         |   |                                      | Break-3  |   |  |                   |  |  |
|                     | Bahman Hall (Central Amphitheater of Amirkabir Fajr Hall (Central Amphitheater of Amirk |                                      |  |   | Room 313 (Department of Mathematics and        |                   |  |  |
|                     | University of Technology)   |                                      | University of Technology)                          |   | Computer Science)                              |                   |  |  |
|                     | https://meetings2.aut.  | ac.ir/smart1/                        | https://meetings2.aut.ac.ir/smart2/                |   | https://meetings2.aut.ac.ir/smart3/ Session 11 |                   |  |  |
| 17:50-18:50         | Session 9<br>Hybrid   |                                      | Session 10<br>Hybrid                               |   | Session 11<br>Hybrid                           |                   |  |  |
| Time                | Topic   | Presenter(s)                         | Topic  | Presenter(s)  | Topic  | Presenter(s)      |  |  |
| Time                | Торіс   | i resenter(s)                        | Real-time mobile mixed-                            | , ,   | Deep learning-based SOH                        | r resenter(s)     |  |  |
| 47.50 40.40         | Improving Safe Driving with Diabetic Retinopathy Detection                              | Niusha Sangsefidi<br>Saeed Sharifian | character license plate                            | Gholamreza Karimi<br>Zahra Alimohammadi<br>Amirhossein Najafi | estimation of Li-ion batteries                 | Leila Amani       |  |  |
| 17:50-18:10         |   |                                      | recognition via deep learning                      |   | in electrical vehicles: Current                | Amir Sheikhahmadi |  |  |
|                     |   |                                      | convolutional neural network                       |   | achievement and progress                       |                   |  |  |
|                     | Stacking Ensemble Learning For Traffic Accident Severity Prediction                     | Hazhir Salari                        | Evaluation of Drivers' Hazard                      | Mohammad Pashaee<br>Ali Nahvi                                 | State-Of-The-Art Analysis of the               |                   |  |  |
| 18:10-18:30         |   | Seyed Amin Hosseini                  | Perception in Simultaneous                         |   | Performance of the Sensors                     | Amir Meydani      |  |  |
|                     |   | Seno                                 | Longitudinal and Lateral Control                   |   | Utilized in Autonomous Vehicles                |                   |  |  |
|                     |   | Erfan Sabzalian                      | of Vehicle Using                                   |   |  |                   |  |  |
|                     | Roll stability enhancement of a   | Mahyar Naraghi                       | Driver Identification by An                        | Rouhollah Ahmadian  | Semantic Segmentation using                    | Mehdi Ghasemzadeh |  |  |
| 18:30-18:50         | 3-axle heavy vehicle by Active  | Maryam                               | Ensemble of CNNs Obtained                          | Mehdi Ghatee  | Events and Combination of                      | Saeed Bagheri     |  |  |
|                     | Roll and AFS control Ghassabzadeh   |                                      | from Majority-Voting Model                         | Johan Wahlstrom   | Events and Frames                              | Shouraki          |  |  |
|                     |   | Sarvazdi                             | Selection  |   |  |                   |  |  |

| Thursday (May, 25) |  |   |   |  |   |   |  |
|--------------------|--|---|---|--|---|---|--|
|                    | Bahman Hall (Central Amphite<br>University of Tech<br>https://meetings2.aut.a  | nology)   |   |  | Room 313 (Department of Mathematics and Computer Science) https://meetings2.aut.ac.ir/smart3/   |   |  |
| 8:00-11:00         | Session 12 Hybrid  |   | Session 13 Hybrid   |  | Session 14<br>Hybrid  |   |  |
| Time               | Topic  | Presenter(s)  | Topic   | Presenter(s)   | Topic   | Presenter(s)  |  |
| 8:00-8:20          | Driver Identification Using Face<br>Liveness Detection   | Seyed Ali Mousavi Fard<br>Seyed Saeed Hayati                                | A Bibliometric Analysis On Artificial<br>Intelligence and Smart Vehicles  | Durga Prasad Singh<br>Samanta<br>B.C.M Patnaik<br>Ipseeta Satpathy<br>Jahanzeh Akbar | Improving speech emotion recognition using audio transformer and features fusion  | Mehdi Ezoji<br>Fateme Mehrpouyan                                |  |
| 8:20-8:40          | A survey on usage of smartphone accelerometer sensor in intelligent transportation systems                           | Hamid Reza Eftekhari  | A Survey on Fraud Detection in Car<br>Insurance   | Behnam Yousefimehr<br>Mehdi Ghatee   | An Overview of Blockchain-based V2X<br>System   | Shabnam Bohlooli<br>Seyyed Amir Asghari<br>Mohammadreza, et al. |  |
| 8:40-9:00          | Deep learning-based concrete crack detection using YOLO architecture   | Elham Nabizadeh<br>Anant Parghi   | Deep Parallel Self-Organizing Maps<br>for Visual Classification   | Habib Izadkhah<br>Mahsa Famil  | Evaluating Influential Parameters on Camera Calibration in Close  | Mehrtash Manafifard<br>Fatemeh Hosseini                         |  |
| 9:00-9:20          | Generating Control Command for an<br>Autonomous Vehicle Based on<br>Environmental Information                        | Fatemeh Azizabadi<br>Farahani<br>Saeed Bagheri Shouraki<br>et al.           | An ILP Model and Optimal Placement<br>Strategy for Electric Vehicle Charging<br>Stations; Case Study of Tehran's P          | Alireza Rajabi Ranjbar<br>Morteza Mollajafari<br>Pooriya Sanaie                      | Modeling and Understanding the<br>Surrounding of an Autonomous<br>Vehicle   | Zahra Dastjerdi<br>Saeed Bagheri Shouraki<br>Fateme Azizabadi   |  |
| 9:20-9:40          | Fractal-Based Spatiotemporal<br>Predictive Model for Car Crash Risk<br>Assessment                                    | Behzad Zakeri<br>Pouya Adineh   | Combining SVM with an efficient feature selection mechanism to predict the stock-market trend                               | Masoomeh Pardakhti<br>Farnaz Hooshmand   | Cross-modal Image-Text Retrieval<br>Using Support Vector Machine  | Ali Goudarzi<br>Fatemeh Taheri<br>Kambiz Rahbar                 |  |
| 9:40-10:00         | Learning-based One-bit DoA<br>Estimation with Single Snapshot  | Yasin Azhdari<br>Mahmoud Farhang  | Exploring the Use of Efficient Deep<br>Learning Algorithms for Lower Grade<br>Gliomas Cancer Image Segmentation:<br>        | Amirreza Babaahmadi<br>Farzaneh Fallahpour   | Forecasting the price of cryptocurrencies in the market using chaotic particle swarm algorithm and neural network                     | Parisa Tayeb Naeini<br>Jamal Gholami Ahangaran                  |  |
| 10:00-10:20        | Routes analysis and dependency detection based on traffic volume:  | Maryam Esmaeili<br>Ehsan Nazerfard  | User Sentiments of ChatGPT Natural<br>Language Processing AI  | Aftab Ara<br>Affreen Ara   | Matching satellite images using key point classification  | Fatemeh Naserizadeh<br>Ali Jafari                               |  |
| 10:20-10:40        | Road Sign Classification using Transfer<br>Learning and Pre-Trained CNN Models                                       | Seyed Hossein Hosseini<br>Foad Ghaderi<br>Behzad Moshiri<br>Mojtaba Norouzi | Applying reinforcement learning in a problem of assigning trucks to origin-destination demands under uncertainty conditions | Zeynab Sadat Tabatabaee<br>Alavi<br>Hadi Mosadegh                                    | Identifying the applications, requirements and solutions for the development of artificial intelligence in modern automotive services | Mohammad Jafari<br>Seyed Mohammad<br>Mahmoudi<br>Mahsa Pishdar  |  |
| 10:40-11:00        | Co-evolving Partial Weights and<br>Architecture of Deep Convolutional<br>Neural Networks for Image<br>Classification | Zaniar Sharifi<br>Khabat Soltanian<br>Ali Amiri                             | Safety and Reliability Assessment of<br>Systems in Autonomous and Non-<br>Autonomous Vehicles Industry:                     | M Amini Moghaddam  |   |   |  |
| 11:00-11:30        |  |   | Break-4   |  |   |   |  |

| Thursday (May, 25) |   |                     |       |           |           |            |  |  |
|--------------------|---|---------------------|-------|-----------|-----------|------------|--|--|
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| Time               |   | Top                 | pic   |           | Presenter | •          |  |  |
| 11:30-12:30        | Closing Session (Physical) with Industry and Academic Invited Speakers  Academic & Indutrial Talks                              |                     |       |           |           | rial Talks |  |  |
| Workshops          |   |                     |       |           |           |            |  |  |
|                    | Bahman Hall (Central Amphitheater of Amirkabir University of Technology) https://meetings2.aut.ac.ir/smart1/                    |                     |       |           |           |            |  |  |
| Time               | Topic   | Presenter           | Topic | Presenter | Topic     | Presenter  |  |  |
| 13:30-18:30        | Workshop CODE: WDD (Designing an intelligent system for detecting driver drowsiness based on brain electrical signals analysis) | Dr. Golnaz Baghdadi | -     |           | -         | -          |  |  |