

## ATSIP'2022 TECHNICAL PROGRAM

Tuesday May 24, 2022	
<b>WEBEX Meeting URL:</b> <a href="https://ieeemeetings.webex.com/ieeemeetings/j.php?MTID=m8b5b9e2c51a54178da6658e1dd75bdf">https://ieeemeetings.webex.com/ieeemeetings/j.php?MTID=m8b5b9e2c51a54178da6658e1dd75bdf</a>	
<b>9:00 – 10:00</b>  <u>PLENARY ROOM</u>	<b>PLENARY SESSION</b>  Chairmen's: <b>Abdelaziz KALLEL</b> (CNRS-Sfax, TUNISIA) & <b>Imed Riadh FARAH</b> (ISAMM, TUNISIA) & <b>Abdelmalek TOUMI</b> (ENSTA-Bretagne, FRANCE)  <u>1<sup>st</sup> Plenary Session</u>  <i>"Contribution of satellite observation for monitoring water and carbon cycles in the context of climate change"</i>  by <b>Mehrez ZRIBI</b> (CESBIO, FRANCE)
<b>10:00 – 10:30</b> <b>BREAK</b>	
<b>10:30 – 12:00</b> <u>ROOM 1</u>	
<b>WEBEX Meeting URL:</b> <a href="https://ieeemeetings.webex.com/ieeemeetings/j.php?MTID=m8b5b9e2c51a54178da6658e1dd75bdf">https://ieeemeetings.webex.com/ieeemeetings/j.php?MTID=m8b5b9e2c51a54178da6658e1dd75bdf</a>	
<b>Regular Session (RST-A1)</b> <b>IMAGE &amp; VIDEO PROCESSING (IVP-S1)</b> Chairmen's: <b>Mounir SAYADI</b> (ENSIT, TUN), <b>Afef ELLOUMI</b> (ENICarthage, TUN) & <b>Mohamed BEN SLIMA</b> (ENET'COM, TUN)	
<b>IVP-13</b>	Video Objects Detection Using Deep Convolutional Neural Networks <i>Nadia Ibrahim and Mohamed Chtourou</i>
<b>IVP-15</b>	Infrared-visible fusion techniques for forest fire imagery <i>Mohamed Tlig, Moez Bouchouicha, Mounir Sayadi and Eric Moreau</i>
<b>IVP -16</b>	Lip segmentation with hybrid model <i>Malek Miled and Mohamed Anouar Ben Messaoud</i>
<b>IVP -18</b>	DWT based blind and robust watermarking technique using ABCD map for medical image <i>Imen Fourati, Abir Chaari, Mondher Frikha, Sonda Kammoun and Amira Trigui</i>
<b>IVP -26</b>	Transfer Learning for Robust Masked Face Recognition <i>Omar Muhi, Mariem Farhat and Mondher Frikha</i>
<b>IVP-22</b>	New and optimal set up for 3D- based stereovision system for manufacturing inspection in 4.0 industry <i>Yosri Ben Salah, Liu Waiguo, Lamia Sellami, Ahmed Ben Hamida, Tian Ailing</i>
<b>10:30 – 12:00</b> <u>ROOM 2</u>	
<b>WEBEX Meeting URL:</b> <a href="https://ieeemeetings.webex.com/ieeemeetings/j.php?MTID=mf18b6f085cd84d607aa604316363c16a">https://ieeemeetings.webex.com/ieeemeetings/j.php?MTID=mf18b6f085cd84d607aa604316363c16a</a>	

<b>Regular Session (RST-A2)</b>	
<b>DATA FUSION MODELING &amp; APPLICATIONS (DFM-S1)</b>	
<b>Chairmen's: Basel SOLAIMAN (FRA), Mohamed FARAH (ISAMM, TUN) &amp; Achraf MAKHLOUFI (ENET'COM, TUN)</b>	
<b>DFM-14</b>	Structured Case Base Knowledge using Unsupervised Learning <i>Ikrum Chourib, Gwenael Guillard, Imed Riadh Farah and Basel Solaiman</i>
<b>DFM-25</b>	Improving Smart City Frameworks based on Enterprise Architecture using Territorial Governance to manage COVID-19 crisis <i>Sahbi Landolsi, Yemna Sayeb, Wajih Krimi and Riadh Farah</i>
<b>DFM-37</b>	Development of a haptic platform within the framework of the Internet of Things <i>Fadwa Saada, David Delouche, Frédéric Krats, Karim Chabir and Mohamed Naceur Abdelkrim</i>
<b>DFM-8</b>	Ambulance Vehicle Routing in Smart Cities Using Artificial Neural Network <i>Taha Hussein, Mondher Frikha, Sulayman Ahmed and Javad Rahebi</i>
<b>DFM-33</b>	Hypothetical reasoning approach based on hypothetical cases <i>Wided Ben Marzouka, Basel Solaiman, Mohamed Farah and Imed Riadh Farah</i>
<b>DFM-57</b>	Model Based Anomaly Detection in High Dimensional Data <i>Imen Gatfaoui, Basel Solaiman and Imed Riadh Farah</i>
<b>Tuesday May 24, 2022: 12:00 – 13:00</b>	
<b>ATSIP CONFERENCE OPENING CEREMONY</b>	
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<b>13:00 – 14:30</b>	
<b><u>BREAK</u></b>	

<b>Tuesday May 24, 2022: 14:30 – 15:30</b>	
<b>WEBEX Meeting URL:</b>	
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<b>14:30 – 15:30</b>	<b>PLENARY SESSION</b>
<b><u>PLENARY ROOM</u></b>	Chairmen's: <b>Gérard CHOLLET (SAMOVAR, FRA) &amp; Zied LACHIRI (ENIT, TUN)</b>
	<b><u>2<sup>nd</sup> Plenary Session</u></b>
	<b><u>"Privacy and Security Issues in Speech Processing"</u></b>
	by <b>Bhiksha RAJ (Carnegie Mellon Univ., Pittsburgh, PA, USA)</b>
<b>15:45 – 17:00</b>	
<b><u>ROOM 1</u></b>	
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<b>Regular Session (RST-B1)</b>	
<b>MEDICAL IMAGES &amp; CAD (MIA-S1)</b>	
<b>Chairmen's: Lamia SELLAMI (ISBS, ATMS, TUN) &amp; Khalil CHTOUROU (CHU Sfax, TUN)</b>	
<b>MIA-1</b>	Training Hacks and a Frugal Man's Net with Application to Glioblastoma Segmentation <i>Jawher Ben Abdallah, Linda Marrakchi-Kacem and Islem Rekik</i>

<b>MIA-61</b>	Image Enhancement Techniques Applied to Magnetic Resonance Images: Multiple sclerosis <i>Besma Mnassri, Amira Ectiou, Fathi Kallel and Ahmed Ben Hamida</i>
<b>MIA-32</b>	Automatic delineation of left ventricle contours in MRI using deep learning <i>Wafa Baccouch, Sameh Oueslati, Basel Solaiman and Salam Labidi</i>
<b>MIA-4</b>	Three-dimensional segmentation method for locating MS lesions in multimodal brain MRI <i>Marwa Naas, Hiba Mzoughi and Ines Njeh, Mohamed Ben Slima and Ahmed Ben Hamida</i>
<b>MIA-9</b>	Lung disease detection in chest X-ray images using Transfert Learning <i>Ines Chouat, Amira Ectiou, Rafik Khemakhem, Wassim Zouch and Mohamed Ghorbel</i>
<b>15:45 – 17:30</b> <b><u>ROOM 2</u></b>	
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<b>Regular Session (RST-B2)</b> <b>REMOTE SENSING &amp; ASSIMILATION (RSA-S1)</b>	
<b>Chairmen's: Abdelaziz KALLEL (CNRS-Sfax, TUN) &amp; Ali KENCHAF (ENSTA Bretagne, FRA)</b>	
<b>RSA-23</b>	A proposal learning strategy on CNN architectures for targets classification <i>Abdelmalek Toumi, Jean-Christophe Cexus and Ali Khenchaf</i>
<b>RSA-34</b>	A deep learning approach based on morphological profiles for Hyperspectral image unmixing <i>Mariam Ayed, Refka Hanachi, Akrem Sellami, Imed Riadh Farah and Mauro Dalla Mura</i>
<b>RSA-43</b>	Effects of spatial filtering on polsar parameter estimation <i>Mohamed Yahia, Tarig Ali, Maruf Mortula and Riadh Abdelfattah</i>
<b>RSA-52</b>	Irrigation Mapping Using SENTINEL-1 and SENTINEL-2 Data <i>Mehrez Zribi, Ehsan Elwan, Michel Le Page, Lionel Jarlan, Luca Brocca, Sara Modanesi, Jacopo Dari and Pere Quintana Segui</i>
<b>RSA-72</b>	Fusion Network for Super Resolution of UAVs Visible and Thermal Images <i>Hèdi Fkih, Tijeni Delleji, Abdelaziz Kallel and Zied Chtourou</i>
<b>RSA-75</b>	Olive tree and shadow instance segmentation based on Detectron2 <i>Asma Ben Abdallah and Abdelaziz Kallel</i>
<b>RSA-48</b>	Spatio-temporal monitoring of soil salinity and land cover changes using remote sensing techniques: Zaghuan case study <i>Karem Saad, Amjad Kallel, Zouhaier Ben Rebah and Basel Solaiman</i>

**Wednesday May 25, 2022**

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9:00 – 10:00

**PLENARY ROOM**

**PLENARY SESSION**

Chairmen's: **Ahmed BEN HAMIDA** (ENIS, TUN) & **Mondher FRIKHA** (ENET'COM, TUN)

**3<sup>rd</sup> Plenary Session**

**"Self-Supervised Speech Processing"**

by **Gérard CHOLLET** (Télécom-Sud Paris, SAMOVAR, FRANCE)

10:00 – 10:30

**BREAK**

10:30 – 12:00

**ROOM 1**

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**Regular Session (RSW-A1)**

**COMPUTER MODELING IN SIGNAL AND IMAGE (MSI-S1)**

Chairmen's: **Hassene SEDDIK** (ENSIT, TUN) & **Mohamed GHORBEL** (ENET'COM, TUN)

**MSI-17**

A combined CNN-LSTM Network for Audio Emotion Recognition using Speech and Song attributes  
*Souha Ayadi and Zied Lachiri*

**MSI -59**

Cross-Modal Learning for Audio-visual Emotion Recognition in Spontaneous Speech  
*Yassamine Lala Bouali, Olfa Ben Ahmed and Smaine Mazouzi*

**MSI -51**

Numerical study of the behavior of the electromagnetic field its relation to the energy absorbed by a human head exposed to a radiofrequency (RF) source application: the cellular  
*Lazhar Bouali, Mohammed Djennah and Redouane Tahmi*

**MSI -36**

Diagnosis of nonlinear delay systems  
*Walid Ben Hassen, Adel Tellili, Nouceyba Abdelkrim and Mohamed Lazhar Wardi*

**MSI -74**

Double-layer Substrate Integrated Waveguide Cavity based RFID chipless Tag  
*Soumaya Sakouhi and Ali Gharsallah*

10:30 – 12:00

**ROOM 2**

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**Special Session (SSW-A2)**

**BIOMEDICAL SIGNAL & HEALTH INFORMATICS (BHI-S1)**

Chairmen's: **Nawres KHLIFA** (ISTMT, TUN), **Zied LACHIRI** (ENIT, TUN) & **Ines NJAH** (ISIMG, TUN)

**BHI-10**

Epileptic seizure detection using deep learning classifiers  
*Dhouha Sagga, Amira Ectiouei, Rafik Khemakhem and Fathi Kallel*

<b>BHI-11</b>	A new automatic method for human coding and non-coding zones characterization and classification based on FCGR coding and CNN classifier <i>Feriel Ben Nasr and Afef Elloumi Oueslati</i>
<b>BHI-12</b>	Involving FCGR method in multiclass cancer diseases classification with transfer learning models <i>Ines Slimene, Imen Messaoudi, Afef Elloumi Oueslati and Zied Lachiri</i>
<b>BHI-19</b>	Pre-miRNA sequence prediction using convolutional neural network <i>Saifeddine Ben Nasr, Imen Messaoudi, Afef Elloumi Oueslati and Zied Lachiri</i>
<b>BHI-46</b>	Deep Learning for Seizure Prediction Using Intracranial Electroencephalogram <i>Nourane Abderrahim, Amira Echioui, Rafik Khemakhem, Mohamed Ghorbel and Ines Kammoun</i>
<b>12:00 – 13:00</b> <b>BREAK</b>	

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<b>13:00 – 14:00</b>  <b><u>PLENARY ROOM</u></b>	<b>PLENARY SESSION</b> <b>Chairmen's: Basel SOLAIMAN (IMT-Atlantique, FRA) &amp; Lamia SELLAMI (ISBS, TUN)</b> <b><u>4<sup>th</sup> Plenary Session</u></b> <b><i>"Virtual Brain Activity and Predictive Physiopathology"</i></b> <b>by Habib BENALI (Concordia University, CANADA)</b>
<b>14:00 – 14:30</b> <b>BREAK</b>	

<b>14:30 – 16:00</b> <b><u>ROOM 1</u></b>	
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<b>Regular Session (RSW-B1)</b> <b>MEDICAL IMAGES &amp; CAD (MIA-S2)</b>	
<b>Chairmen's: Fathi KALLEL (ENET'COM, TUN), Mounir SAYADI (ENSIT, TUN) &amp; Khalil CHTOUROU (CHU-Sfax, TUN)</b>	
<b>MIA-27</b>	Combination of Volumetric and Topologic characteristic towards diagnosis of Alzheimer's disease stage <i>Besma Mabrouk, Nouha Bouzidi and Ahmed Ben Hamida</i>
<b>MIA-6</b>	U-NET Architecture for automatic MS lesions segmentation using MR images <i>Ghofrane Ghodhmani, Mouna Sahnoun, Fathi Kallel and Patrick Siarry</i>

<b>MIA-39</b>	Network In-Network (NIN) for Glioma Tumor Grade classification <i>Wiem Takrouni and Ali Douik</i>
<b>MIA-41</b>	Deep Learning Models for Classification of Motor Imagery EEG Signals <i>Sana Belgacem, Amira Ectiou, Rafik Khemakhem, Mohamed Ghorbel and Ines Kammoun</i>
<b>MIA-49</b>	Deep learning for Detection of prostate tumors by microscopic cells and MRI <i>Imen Labiadh, Hassene Seddik and Larbi Boubchir</i>
<b>MIA-64</b>	Multiple Sclerosis Segmentation using Deep Learning Models-Review <i>Abdelkader Alrabai, Amira Ectiou and Ahmed Ben Hamida</i>
<b>14:30 – 16:00</b> <b><u>ROOM 2</u></b>	
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<b>Regular Session (RSW-B2)</b> <b>IMAGE &amp; VIDEO PROCESSING (IVP-S2)</b> <b>Chairmen's: Habib HAMAM (U-MONCTON, CAN), Mohamed GHORBEL (ENET'COM, TUN)</b>	
<b>IVP-28</b>	Siamese Network for Face Recognition in Degraded Conditions <i>Laila Ouannes, Anouar Ben Khalifa and Najoua Essoukri Ben Amara</i>
<b>IVP-29</b>	A comparative study of geometric primitives fitting to 3D point clouds <i>Aicha Ben Makhlof, Malika Jallouli and Mohamed Ali Mahjoub</i>
<b>IVP-30</b>	Investigating the robustness of multi-view detection to current adversarial patch threats <i>Bilel Tarchoun, Anouar Ben Khalifa and Mohamed Ali Mahjoub</i>
<b>IVP-31</b>	Fisher-HHT: A Feature Extraction Method for Hand Gesture Recognition with a Leap Motion Controller <i>Nahla Majdoub Bhiri, Safa Ameer, Imen Jegham, Mohamed Ali Mahjoub and Anouar Ben Khalifa</i>
<b>IVP-42</b>	Deepfake video detection using InceptionResnetV2 <i>Sarra Guefrachi, Marwa Ben Jabra and Habib Hamam</i>

<b>Thursday May 26, 2022</b>	
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<b>9:00 – 10:00</b>  <b><u>PLENARY ROOM</u></b>	<b>PLENARY SESSION</b> <b>Chairmen's: Mohamed BEN SLIMA (ENET'COM, TUN) &amp; Mounir SAYADI (ENSIT, TUN)</b> <b><u>5<sup>th</sup> Plenary Session</u></b> <b><i>"Dissemination of Scientific Research results: Trends, Threats and Prospects"</i></b> <b>by Habib HAMAM (Moncton University, CANADA)</b>
<b>10:00 – 10:30</b> <b>BREAK</b>	

<b>10:30 – 12:00</b> <b><u>ROOM 1</u></b>	
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<b>Regular Session (RST-A1)</b> <b>MEDICAL IMAGE &amp; CAD (MIA-S3)</b> <b>Chairmen's: Lamia SELLAMI (ISBS, TUN) &amp; Mohamed H BEDOUI (FMM, TUN) &amp; INES NJEH (ISIMG, TUN)</b>	
<b>MIA-56</b>	Automatic evaluation of 3D volume infection rates: Application to the Covid-19 context <i>Hanene Ben Abdelali, Asma Ben Abdallah, Asma Achour, Mabrouk Abdelali, Asma Migaou and Mohamed Hédi Bedoui</i>
<b>MIA-60</b>	DL segmentation and 3D assessment of hippocampal atrophy in mesial temporal lobe epilepsy <i>Aymen Chaouch, Asma Ben Abdallah, Rim Ayari, Mohamed Hédi Bedoui and Mouna Aissi</i>
<b>MIA-3</b>	Review of Computer Aided-Diagnosis (CAD) Systems for MRI Gliomas brain tumors explorations based on Machine Learning and Deep learning <i>Hiba Mzoughi, Ines Njeh, Mohamed Ben Slima and Ahmed Ben Hamida</i>
<b>MIA-76</b>	Deep Learning for Automatic Pulmonary Embolism Identification Using CTA Images <i>Hajer Khachnaou, Mariem Agrébi, Siwar Halouani and Nawres Khelifa</i>
<b>MIA-66</b>	Estimating doses of gamma radioisotope therapy using Visual Monte Carlo Simulation <i>Guzlan Miskeen, Ikhlas Al Issawi, Najwa Jumaa and Sana Fadil</i>
<b>10:30 – 12:00</b> <b><u>ROOM 2</u></b>	
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<b>Regular Session (RSS-A1)</b> <b>IMAGES AND VIDEO PROCESSING (IVP-S3)</b> <b>Chairmen's: Mohamed FARAH (ISAMM, TUN) &amp; Mondher FRIKHA (ENET'COM, TUN)</b>	
<b>IVP-44</b>	Face Expression Neutralisation Using Improved Variational Autoencoder <i>Wiem Grina and Ali Douik</i>
<b>IVP-38</b>	Deep learning for pedestrian behavior understanding <i>Soulayma Gazzeh and Ali Douik</i>
<b>IVP-55</b>	ResNet-50 based fire and smoke images classification <i>Hedi Jabnouni, Imen Arfaoui, Mohamed Ali Cherni, Moez Bouchouicha and Mounir Sayadi</i>
<b>IVP-73</b>	Visual Tracking of mini-UAVs using Modified YOLOv5 and Improved DeepSORT Algorithms <i>Tijeni Delleji, Hèdi Fkih, Abdelaziz Kallel and Zied Chtourou</i>
<b>IVP-7</b>	Mesh 2D Network on Chip with an open core protocol based network interface <i>Omar Trigui, Sabrina Ammar, Mohamed Ghorbel and Ahmed Ben Hamida</i>
<b>12:00 – 13:00</b> <b>ATSIP CONFERENCE CLOSING</b>	