2021 GTTI workshop
"Deep Signal Processing for a safer world"

VIRTUAL EVENT

ZOOM video platform will be used.

To connect use this link:
https://unipd.zoom.us/j/87930477008?pwd=bTNNQ2xEUldDdWVEMVZLQys2bGJNUT09

Meeting ID: 879 3047 7008
Passcode: 088521

Date: June 17, 2021
Time: 15:00 to 18:00

Objective

During the last years, signal processing world has been completely transformed by the development and the massive adoption of deep learning technologies. This special meeting focuses on recent DL-enabled forensic and safety strategies that have enabled significant improvements in terms of robustness and accuracy within different signal processing fields, ranging from multimedia analysis to automotive.

The meeting is organized in three sections: deepfakes and generative models, chains of processing operators, and smart multimedia analysis in street scenes. A panel discussion will follow to allow participants to share their views on each subject.

Program

15:00 Welcome to participants, *G. Boato (University of Trento), S.Milani (University of Padova)*

15:05 **Analysis strategies for deep forged data.**
Moderator: S. Verde – University of Trento

Perceptual quality-preserving black-box attack in image forensics, *D. Gragnaniello – University Federico II, Naples*
A Semantic Approach to Detecting Deepfakes Via Emotional Inconsistencies, *D. Salvi, Politecnico di Milano*
Deepfake analysis and detection using quality measures, *G. Orrù, University of Cagliari*
Multimedia Forensics Algorithms for Deepfake detection, *L. Guarnera, University of Catania*

15:50 **Forensics and security signal processing**
Moderator: D. Gragnaniello –University Federico II, Naples

Multi-clue reconstruction of resharing chains in social media images, *F. Lago, University of Trento*
Social media platform identification of videos, *L. Maiano, Sapienza University, Rome*
First Quantization Estimation for double JPEG compressed images, *F. Guarnera, University of Catania*
Looking through the walls: inferring scenes from video-surveillance encrypted traffic, *D. Mari, University of Padova*
Identification of malicious attacks in Cognitive-IoT Radios. *A. Krayani, University of Genova.*

16:50 **Smart mutimedia processing for safer automonomous driving**
Moderator: U. Michieli, University of Padova

Physics-informed image translation with generative networks, *F. Pizzati, University of Bologna, INRIA, VisLab*
Uniform Class-Accuracy Distribution for a Safer Driving, *F. Barbato, University of Padova*
Virtual Track: A Vision-based Integrity Enhancement, *S. Baldoni, University of Roma 3*
Detection of GAN-synthesized street videos, *O. Alamayreh, University of Siena*

17:27 **Discussion Panel**

17:47 **Wrap up and closure**

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