# MuVer'17 – First International Workshop on Multimedia Verification

Vasileios Mezaris
CERTH-ITI
Thermi-Thessaloniki, Greece
bmezaris@iti.gr

Lyndon Nixon
MODUL Technology GmbH
Vienna, Austria
lyndon.nixon@modul.ac.at

Symeon Papadopoulos
CERTH-ITI
Thermi-Thessaloniki, Greece
papadop@iti.gr

Jochen Spangenberg
Deutsche Welle
Berlin, Germany
jochen.spangenberg@dw.com

## ABSTRACT

This paper gives an overview of the First International Workshop on Multimedia Verification, organized as part of the 2017 ACM Multimedia Conference. The paper outlines the current verification scene and needs, discusses the goals of the workshop, and presents the workshop's program, consisting of two invited keynote talks and three presentations of full papers that have been accepted at the workshop.

## CCS CONCEPTS

• **Information systems → Data analytics**; **Multimedia information systems**; **Web applications**;

## KEYWORDS

Multimedia verification; video; information veracity; multimedia forensics; trust

## 1 INTRODUCTION

Multimedia, especially when also including video, is a very powerful medium for broadcasting and sharing online, particularly in response to the need of obtaining timely information about what is happening directly around us and elsewhere in the world. The digital media revolution and the convergence of social media with broadband wired and wireless connectivity have already brought breaking news to a multitude of online multimedia platforms, both traditional and new ones. Furthermore, news organizations delivering information by Web streams and TV broadcast (be it traditional organizations or new, primarily Web-based and sometimes semi-professional news outlets) increasingly rely on user-generated multimedia recordings of breaking and developing news events shared by others in social media for illustrating a story. However, there is not only richness and expressiveness of information in user-generated multimedia; there is also a high risk of deception and misinformation [3]. Access to increasingly sophisticated multimedia editing and content management tools, and the ease with which fake information spreads in electronic networks, means that news outlets and social platforms that wish to remain reputable, as well as amateurs re-publishing a multimedia item (e.g. bloggers), need to carefully verify third-party content before (re-)publishing it. This is vital in order to break news quickly, but not at the expense of accuracy and factuality. In addition to this, even individual consumers of TV and online social media and multimedia sharing services are increasingly aware of the risk of deception that exists in media sharing. That is why increasingly more people are becoming interested in simple ways of understanding what to trust, how to assess the veracity of information, and how to debunk fakes.


*MM '17, October 23–27, 2017, Mountain View, CA, USA*

ACM ISBN 978-1-4503-4906-2/17/10.
https://doi.org/10.1145/3123266.3132058

## 2 WORKSHOP GOAL

The goal of this workshop is to bring together multimedia and video processing researchers, social media researchers, digital multimedia forensics experts, new media professionals, as well as multimedia and social sharing platform representatives, in an interdisciplinary forum for presenting and discussing the latest advances and open challenges in multimedia verification.

Topics of interest include, but are not limited to:

- Reverse image and video search for multimedia verification
- Use of contextual cues for multimedia, video, audio and associated content verification
- Multimedia, audio and video file forensic analysis
- Detection of multimedia items on breaking news events in social media
- User trustworthiness in Web-based multimedia sharing and social media platforms
- Multimedia geotagging and geographical aspects of multimedia verification
- Ethical-legal issues of multimedia verification and sharing
- News framing and manipulation through multimedia
- Journalistic workflows and (best) practices for multimedia verification
- Datasets and benchmarking for multimedia verification
- Tools and applications for multimedia, video, image and audio verification

## 3 WORKSHOP PROGRAMME

The workshop programme is organized into two keynote talks and a session of oral paper presentations.

The two keynote talks are:

- "Multimedia forensics: an overview of recent advances and open issues", delivered by Dr. Giulia Boato (University of Trento, Italy)
- "Privacy vs Multimedia Verification: A Conundrum", delivered by Dr. Gerald Friedland (University of California Berkeley, and Lawrence Livermore National Lab, USA)

The paper oral presentation session includes three full papers:

- "Collaborative Networks for Person Verification" [4]. This paper addresses the problem of person verification in video surveillance systems, presenting a method for verifying if a given pair of human body images belong to the same identity. The proposed method is based on deep learning, specifically on a combination of an improved siamese network and a deep discriminative network.
- "Video Retrieval for Multimedia Verification of Breaking News on Social Networks" [1]. This paper presents an approach to automatically detecting breaking news events from social media streams, and collecting relevant video documents from social networks regarding that breaking news. The paper also introduces a visual analytics dashboard for providing access to the collected content and to various analysis results on top of this content, and for selecting newsworthy content for verification.
- "The InVID Video Verification Browser Plug-in" [2]. This paper presents an open-source browser plug-in that aims at supporting journalists and news professionals in their efforts to verify user-generated video. The plug-in brings together a number of sophisticated multimedia analysis components and services, to make the completion of a set of video verification tasks as easy and quick as possible for journalists.

## 4 ACKNOWLEDGEMENT

This work was supported by the EU's Horizon 2020 research and innovation programme under grant agreement H2020-687786 InVID. We would also like to thank all presenters and participants of the workshop, and the ACM Multimedia 2017 Chairs for making this workshop possible.

## REFERENCES

[1] Lyndon Nixon, Shu Zhu, Walter Rafelsberger, Fabian Fischer, Max Göbel, and Arno Scharl. 2017. Video Retrieval for Multimedia Verification of Breaking News on Social Networks. In *Proc. Int. Workshop on Multimedia Verification at ACM Multimedia 2017.* ACM, Mountain View, CA, USA.

[2] Denis Teyssou, Jean-Michel Leung, Evlampios Apostolidis, Konstantinos Apostolidis, Symeon Papadopoulos, Markos Zampoglou, Olga Papadopoulou, and Vasileios Mezaris. 2017. The InVID Video Verification Browser Plug-in. In *Proc. Int. Workshop on Multimedia Verification at ACM Multimedia 2017.* ACM, Mountain View, CA, USA.

[3] The InVID project. 2017. In Video Veritas - Verification of Social Media Video Content for the News Industry. (2017). Retrieved August 11, 2017 from http://www.invid-project.eu/

[4] Yihao Zhang, Wenmin Wang, and Jinzhuo Wang. 2017. Collaborative Networks for Person Verification. In *Proc. Int. Workshop on Multimedia Verification at ACM Multimedia 2017.* ACM, Mountain View, CA, USA.