

UNCOVER



UNCOVER at the IH&MMSec Conference



UNVEILING TRUTH IN MULTIMEDIA DATA:

Exploring AI from Legal and Technical Perspectives



Wednesday, June 26th 2024



Parador de Baiona, Spain

About the UNCOVER session

Unveiling Truth in Multimedia Data: Exploring AI from Legal and Technical Perspectives

An Endorsed Event by UNCOVER

Baiona, Spain. June 26th, 2024

14:20-15:30	Plenary Talk: "Image-Based Evidence in International Criminal Prosecutions: Charting a Path Forward," by Jonathan W. Hak (Leiden University)
15:30-16:00	Coffee break
16:00-17:30	<p>Round Table</p> <hr/> <p>"Navigating the AI Frontier: Challenges in Multimedia Forensics and Steganalysis"</p> <p>Panelists:</p> <ul style="list-style-type: none">• Law Enforcement Agency Representative• Industry Representative• Government Agency Representative: Ralf Zimmermann (ZITiS)• Legal Representative: Jonathan W. Hak (Leiden University)• Academia Representatives: Mauro Barni (University of Siena) & Jessica Fridrich (Binghamton University) <p>Moderator:</p> <ul style="list-style-type: none">• Luis Pérez Freire (Gradient)

About the Plenary Talk:

Image-Based Evidence in International Criminal Prosecutions: Charting a Path Forward

ABSTRACT

We are confronted daily with images of war, conflict, and crime. These images frequently exist in the largely unregulated open source environment where legitimate images compete with the triple threat of AI generated synthetic content, deepfakes, and shallowfakes. How can viewers know what images to trust? Pictures do not speak for themselves and frequently require technical and interpretive assistance. Questioning the authenticity and reliability of image-based evidence is an essential step in gaining an informed understanding of what propositions images may support.

Image-based evidence can be extraordinarily valuable in the search for the truth, but the current approach to this evidence is fundamentally inadequate for truth seeking purposes. The use of image-based evidence in international criminal prosecutions is at a tipping point. This presentation will look at the challenges posed by images and steps that must be undertaken to use them more effectively. The focus will be on legal and practical considerations for the use of this evidence in criminal investigations and the courtroom.



PHOTO CREDITS: JONATHAN W. HAK

SPEAKER

Jonathan W. Hak

Dr. Jonathan W. Hak KC is a barrister and solicitor who served as a Crown Prosecutor in Canada for over thirty years. He has extensive experience prosecuting serious and violent crime and utilizing image-based evidence in complex cases. He is an international imagery law lecturer who teaches extensively in the UK, US, Canada, Singapore, and Europe on the legal and practical considerations involved in the effective use of image-based evidence in criminal prosecutions. Jonathan holds a Diploma in Criminal Justice (Mount Royal University), a BSc (with distinction) (California State University), an LLB (University of British Columbia), an LLM (University of Cambridge), and a PhD in Law (Leiden University). The focus of his recent PhD work is on the use of non-textual evidence in international criminal prosecutions. He is the author of *Image-Based Evidence in International Criminal Prosecutions: Charting a Path Forward* (Oxford University Press, 2024). Jonathan was appointed Queen's Counsel in 2006.

About UNCOVER

Criminals and terrorists use more and more data hiding methods (steganography) for concealing incriminating information in innocent-looking digital media files such as images, video, audio, and text files. The main objective of UNCOVER is to fill existing gaps in the ability of Law Enforcement Agencies (LEAs) for detecting the presence of such hidden information (i.e., steganalysis). The partners of UNCOVER are committed to substantially increase the technological autonomy of LEAs in the field of digital media steganalysis. With its consortium of 22 partners including LEAs, forensic institutes, leading researchers working at universities and research institutions, as well as industrial companies, UNCOVER sets out to outperform available steganalysis solutions in terms of performance, usability, operational needs, privacy protection, and chain-of-custody considerations.

PROJECT OBJECTIVES



CONDUCT a detailed analysis about the various aspects of the needs and requirements of LEAs for detecting and investigating steganography.



CONSOLIDATE relevant information about existing steganographic tools and centralise this information in an intuitive database for LEAs.



IMPROVE existing methods for operational steganalysis in digital media workflows.



IMPLEMENT a flexible and interoperable platform for the integration of steganalysis detection tools.

PROJECT FACTS

Duration

36 Months

Horizon 2020

SU-FCT02-2020
Research and
Innovation Action

REFERENCE


101021687

Coordinator


ROYAL MILITARY ACADEMY
(Belgium)

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101021687.



DEMONSTRATE the steganographic detection capabilities with realistic test cases and scenarios.



ENSURE the obtained results are admissible in European court rules.



PROVIDE a comprehensive training program for LEAs and forensic institutes by providing in-house training.



DISSEMINATE outcomes, communicate the project and prepare an exploitation and sustainability plan.



Universidade Vigo

