

# UNCOVER



### About UNCOVER

The main objective of UNCOVER is to develop innovative technologies for the detection of hidden information (steganalysis) and to increase the technological autonomy of Law Enforcement Agencies (LEAs) in the field of digital media steganalysis. With its consortium of 22 partners, which includes LEAs, forensic institutes, leading researchers and software developers, as well as technology companies, UNCOVER aims to improve the current standards of steganalysis solutions with respect to performance, usability, operational needs, protection of privacy and chain-of-custody considerations.

Our international and interdisciplinary team contributes to debates in the field related to digital media steganalysis. Check out our latest news and updates below.

### More about UNCOVER

### UNCOVER Past Events



**UNCOVER Consortium Meeting in Innsbruck**

📅 16-20 January 2023

📍 University of Innsbruck, Austria

💬 The meeting focused on the progress and further steps within the project and provided an opportunity for the partners to discuss important issues in person. Based on this fruitful exchange, partners decided to hold more regular in-person meetings in the future to foster closer collaboration among the consortium members. The second day of the consortium meeting took place at 1.905 m altitude at Seegrube, overlooking the city of Innsbruck and surrounding mountains. Despite the cold, spirits were high.



## Capture the Flag on Steganalysis

📅 10-12 of May 2023


📍 University of Technology of Troyes, France


💬 The Capture the Flag started with a one-day training & hands-on on steganography and steganalysis. It was followed by a Capture-the-Flag (CTF) competition in which about 35 participants working in teams had 30 hours to solve 12 challenges involving images, audio and video files. Each challenge was designed in such a way that, upon success, **it provides** a piece of a bigger puzzle. The whole challenges were designed around a scenario in which two teachers have been found dead in the UTT facility. This seems to be suicide, but some evidence hidden in media proved that they both discover wrong doing from some of their colleagues. The main difficulty of this whole scenario is that the solution, i.e., the name of the murderer, can be found only when solving all challenges and cannot only depend upon the resolution of a few of them. To this end, the success of **the first easier** challenges tend to point out to some suspects while the hardest challenges provide twists in the scenario and eventually explain who was the murderer.



## Hackathon Event in Vienna

 **24-25 May 2023**

 **Vienna, Austria.**

 The meeting was based on a fruitful exchange of experiences and tips among the project end-users. One of the takeaways of this activity, is that Law Enforcement Agencies have to foster closer collaboration among the consortium members.

The participants were able to improve their steganalysis skills, by testing their knowledge by solving cases of detection of the presence of hidden information in the stego-object. The event created great results.

**More on the past events**

### UNCOVER Upcoming Events

**Do you want to test your skills to discover hidden information and be part of the UNCOVER Project in a challenging environment?**


**Do you want to learn new techniques, network with other professionals, and enrich your technical capabilities and skills?**

**If yes, then you don't want to miss the Summer School and Capture the Flag Event in order to understand the development of an efficient steganalysis framework for uncovering hidden data in digital media!**

## Summer School and Capture the Flag (CTF) in Prague

 4-8 September 2023

 Prague, Czech Republic

 The consortium will organise a Summer School & Capture the Flag (CTF) Event, that will bring together **more than 50 attendants** with the purpose of training Law Enforcement Agents, Forensic Institutions and students on steganography and steganalysis.

The Summer School will feature several lectures covering different topics in Steganography and Steganalysis combined with hands-on activities.

The Summer School is combined with the CTF event, which is a computer security competition where participants work in teams to solve a variety of challenges and find hidden pieces of data called „flags“.

The scope of the event is:

- (1) to provide participants with theoretical and practical understanding of steganalysis methods;
- (2) to do a co-creative environment between LEAs and students with information technology background, where they can exchange approaches and methodologies on stenography and where they can learn from each other;
- (3) be part of a dedicated Capture the Flag event, in which all the participants can put into practise their skills and knowledge, applying the different approaches learned.

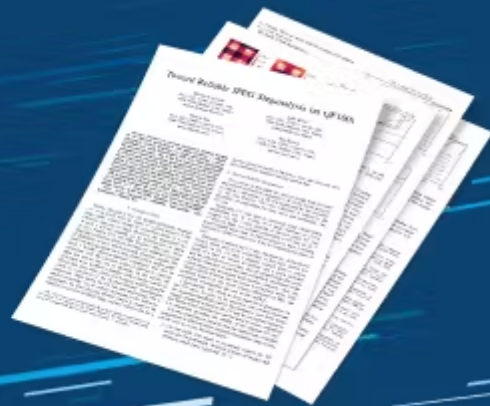
**The aim is to have a co-creative environment between Law Enforcement Agencies and students to exchange approaches and methodologies on steganalysis and learn from each other.**

 Do you want to know more about the event?

 Write to [office@uncoverproject.eu](mailto:office@uncoverproject.eu)

### UNCOVER Publications

## Publications

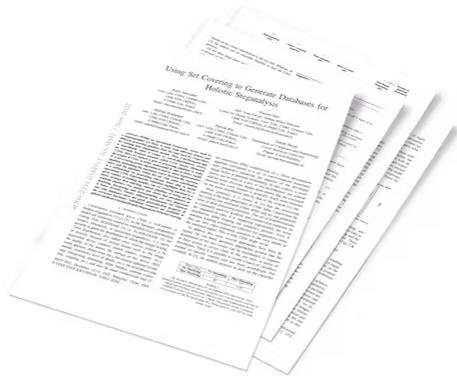


The UNCOVER consortium issued 14 publications in the last year, talking and analysing steganalysis methodologies, and approaches.

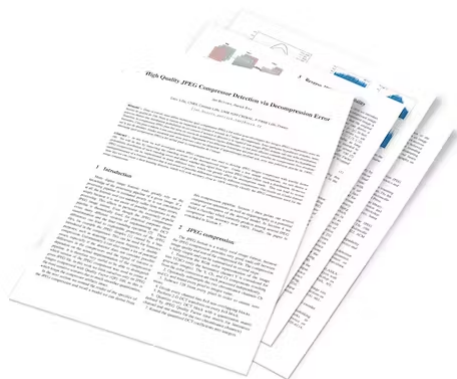
Below some of the consortium partners available publications:



Etienne Levecque, John Klein, Patrick Bas, and Jan Butora. **Toward Reliable JPEG Steganalysis (at QF100)**. In WIFS 2022 – 14th IEEE International Workshop on Information Forensics and Security, Shanghai (virtual), China, December 2022. IEEE.



Rony Abecidan, Vincent Itier, Jérémie Boulanger, Patrick Bas, and Tomáš Pevný. **Using Set Covering to Generate Databases for Holistic Steganalysis**. In WIFS 2022 – 14th IEEE International Workshop on Information Forensics and Security, Shanghai (virtual), China, December 2022. IEEE.



Jan Butora and Patrick Bas. **High Quality JPEG Compressor Detection via Decompression Error**. In GRETSI, Nancy, France, September 2022.



Rony Abecidan, Vincent Itier, Jérémie Boulanger, and Patrick Bas. **Adaptation de domaine pour l'analyse forensique d'images**. In GRETSI 2022 – Colloque Francophone de Traitement du Signal et des Images, Nancy, France, September 2022.



Etienne Levecque, Jan Butora, John Klein, and Patrick Bas. **Vers une stéganalyse certifiée pour des images JPEG**. In GRETSI 2022, Nancy, France, September 2022.

....and many more UNCOVER publications are available

UNCOVER Publications

### TEAM INVOLVED



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