

Dear Reader,

Welcome to the first CRITERIA Newsletter!

The **CRITERIA project** aims to strengthen and expand existing risk analysis methods, by introducing novel approaches, such as identifying risk factors from qualitative evidence (e.g. narrative analysis), building composite indicators (e.g. using sentiment indicators to predict behaviour), incorporating risk interaction and risk cascading assessments and consolidating the human security and human rights dimensions of border security.

Strong and accurate risk and vulnerability analysis models have to be backed by effective intelligent analysis technology and tools, which can serve the identified complex indicators in an effective and efficient way. Building upon existing text, media, data and network analysis technology, CRITERIA develops and evaluates advanced analysis technologies and tools that are tailored to the new comprehensive risk and vulnerability indicators of the CRITERIA methodology. Special focus is given to the role of narratives, events, attitudes, perception of situations for migration-related decisions as well as to the evolution of migration-related situations, the vulnerability of borders and humans and the development of threats in a verifiable and understandable way.

Objectives:

- Multi-perspective risk, vulnerability and threat understanding.
- Tools for effective cross-media and multi-source risk and vulnerability analysis, including validation support.
- Awareness for evolution reflecting the dynamics of the setting.
- Integrative and impactful solutions.
- Provision of actionable insights.
- Legally compliant and societally acceptable solutions.



HIGHLIGHTS FROM YEAR 1

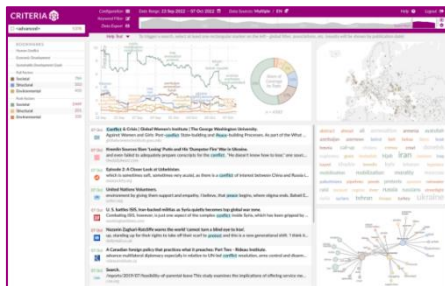


February 2022: Milestone #1 achieved

The first six months of the project focused on building a profound foundation for effectively targeting CRITERIA's goals and objectives. A series of workshops with end users and application partners played a central role in this context by strongly contributing to a better understanding of the demands and expectations of the target groups with respect to the intended risk and threat analysis methods and technologies. This process resulted in the establishment of a joint terminology and the definition of functional and quality requirements.

May 2022: Conference “Security Challenges and Opportunities in the Use of Open-Source Information and Emerging Technologies in the Field of Migration”

In collaboration with our sister project MIRROR, CRITERIA co-organized a conference under the theme of “*Security Challenges and Opportunities in the Use of Open-Source Information and Emerging Technologies in the Field of Migration*”. The conference strived to achieve a better understanding of the challenges and opportunities posed by the exploitation of open sources and emerging technologies in addressing contemporary security challenges.



October 2022: Milestone #2 achieved

The first major release of the CRITERIA system and the first fundamental steps in risk and vulnerability analysis methodology marked the achievement of the second major milestone of the project. During this phase, the requirement for two separate applications emerged in order to meet the information needs of the end users: an exploration and discovery tool (dashboard) and a new risk assessment tool

for in-depth interpretation and exploitation of previously identified risks and threats. The dashboard allows users to efficiently explore the large amount of content in CRITERIA-related topics and to further drill-down into selected hotspots for an in-depth picture across multiple dimensions. The risk assessment tool is intended as a semi-automatic evidence validation tool, its design following the user requirements for risk identification and validation processes. It will expand on innovative ways to make explicit uncertainties and explanations of automatically extracted information.

LATEST NEWS & RECOMMENDED READINGS

- An article by Luciano d’Andrea from Conoscenza e Innovazione (K&I) discusses the **changes in border concept and practices** caused by the emerging shift in the perception of what a border is.
- Prof. Christos Kassimeris from the Centre for Risk and Decision Sciences (CERIDES) addresses in his article the necessity to reshape the **European Union’s migration and asylum policies**.
- The study **Factors Influencing Social Acceptance of Risk and Threat Analysis Methodologies for Hybrid Treats** under the coordination of the K&I research team began early this year.
- **CRITERIA became the 15th member of the H2020 BES Cluster** – an H2020 Border External Security Cluster initiated and led by METICOS. We are happy to be part of the H2020 BES Cluster and look forward to active exchanges and a fruitful collaboration!

UPCOMING EVENTS

- **December 5-7, 2022:** You can meet our partners from **CERTH** at the IEEE Int. Symposium on Multimedia (IEEE ISM) in Naples, Italy.
- **December 6-9, 2022:** **CERTH** will be present at the TRECVID 2022 Workshop (online).
- **January 9-13, 2023:** You can meet our partners from **CERTH** at the **MediaEval 2022 Workshop**, hosted in Bergen, Norway.
- **January 18-20, 2023:** CRITERIA project meeting in Martigny, Switzerland, hosted by **Idiap Research Institute**. We look forward to meeting again in person and to having inspiring and constructive exchanges and discussions among the project partners.

ISM 2022

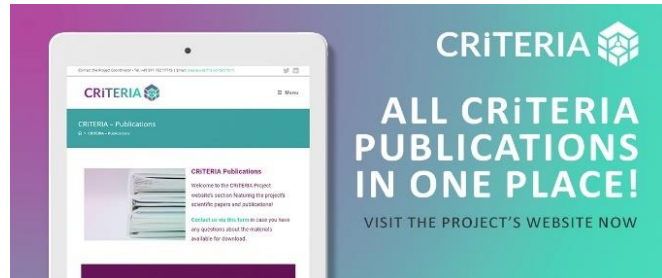
TRECVID 2022
December 6-9, 2022

MediaEval

Idiap
RESEARCH INSTITUTE

PUBLICATIONS & ARTICLES

- *"ViGAT: Bottom-up event recognition and explanation in video using factorized graph attention network"* by Nikolaos Gkalelis, Dimitrios Daskalakis, and Vasileios Mezaris (IEEE Access, Vol 10, Oct. 2022)
- *"Learning Visual Explanations for DCNN-Based Image Classifiers Using an Attention Mechanism"* by Ioanna Gkartzonika, Nikolaos Gkalelis, and Vasileios Mezaris (Proc. ECCV 2022 Workshop on Vision with Biased or Scarce Data (VBSD), Oct. 2022)
- *"Are All Combinations Equal? Combining Textual and Visual Features with Multiple Space Learning for Text-Based Video Retrieval"* by Damianos Galanopoulos and Vasileios Mezaris (Proc. ECCV 2022 Workshop on AI for Creative Video Editing and Understanding (CVEU), Oct. 2022)
- *"CrisICSum: Interpretable Classification and Summarization Platform for Crisis Events from Microblogs"* by Thi Huyen Nguyen, Miroslav Shaltev, and Koustav Rudra (Proc. ACM International Conference on Information & Knowledge Management (CIKM), Oct. 2022)
- *"Rationale Aware Contrastive Learning Based Approach to Classify and Summarize Crisis-Related Microblogs"* by Huyen Nguyen and Koustav Rudra (Proc. ACM International Conference on Information & Knowledge Management (CIKM), Oct. 2022)
- *"IDIAPers @ Causal News Corpus 2022: Efficient Causal Relation Identification Through a Prompt-based Few-shot Approach"* by Martin Fajcik, Muskaan Singh, Juan Zuluaga-Gomez, Esaú Villatoro-Tello, Sergio Burdisso, Petr Motlicek, Pavel Smrz (CASE 2022 Workshop at the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP), Dec. 2022)
- *"IDIAPers @ Causal News Corpus 2022: Extracting Cause-Effect-Signal Triplets via Pre-trained Autoregressive Language Model"* by Martin Fajcik, Muskaan Singh, Juan Zuluaga-Gomez, Esaú Villatoro-Tello, Sergio Burdisso, Petr Motlicek, Pavel Smrz (CASE 2022 Workshop at the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP), Dec. 2022)
- *"TAME: Attention Mechanism Based Feature Fusion for Generating Explanation Maps of Convolutional Neural Networks"* by Mariano Ntroukas, Nikolaos Gkalelis, and Vasileios Mezaris (Proc. IEEE International Symposium on Multimedia (ISM), Dec. 2022)
- *"Gated-ViGAT: Efficient bottom-up event recognition and explanation using a new frame selection policy and gating mechanism"* by Nikolaos Gkalelis, Dimitrios Daskalakis, and Vasileios Mezaris (Proc. IEEE International Symposium on Multimedia (ISM), Dec. 2022)
- *"ITI-CERTH participation in ActEV and AVS Tracks of TRECVID 2022"* by Konstantinos Gkountakos, Damianos Galanopoulos, Despoina Touska, Kostas Ioannidis, Stefanos Vrochidis, Vasileios Mezaris, and Ioannis Kompatsiaris (Proc. TRECVID 2022 Workshop, Dec. 2022)



STAY IN TOUCH

Follow us on the official CRITERIA channels – [LinkedIn](#) & [Twitter](#) - for regular updates on the progress of the project.