

Forensic Activity as a Component of the Fight Against Obstruction of Justice

Ella Simakova-Yefremian *

* Doctor of Law, NSC «Hon. Prof. M. S. Bokarius FSI», Kharkiv, Ukraine,
ORCID: <https://orcid.org/0000-0002-8246-7688>, e-mail: simakova@hniise.gov.ua

DOI: 10.32353/khrife.1.2025.01 UDC 343.98

Received: 25.03.2025 / Accepted for print: 26.03.2025 /

Available online: 31.03.2025



Forensic science and criminalistics play a pivotal role in upholding justice by helping to establish objective truth in criminal proceedings. Simultaneously, current realities show that criminal activity is becoming increasingly complex, emphasizing active resistance of the subject of offense to investigation. Resistance to investigations encompasses a wide range of unlawful acts, from the destruction of evidence to tampering with witnesses and investigators, and has become a systemic phenomenon requiring in-depth scientific understanding and the development of effective methods to neutralize it. The issue's significance is rooted in the rapid growth of crime, its transnational nature, and improvement in the methods used to conceal crime. This makes it more difficult for law enforcement agencies to investigate and solve crimes.

Under such circumstances, criminalistics, as a science that studies patterns of crime mechanisms and how to solve them, should adapt to new challenges. Resistance to investigation is gradually evolving into forms necessitating not only practical but also theoretical approaches to overcoming it. For example, the use of corruption mechanisms, tampering with evidence, or creation of artificial obstacles to the investigation call for recognizing the concept of resistance to crime investigation as an independent object of forensic research. At the same time,

This article is translation of the original Ukrainian content, which source is available at the link: <https://khrife-journal.org/index.php/journal> (translated by Daryna Dukhnenko). The author acknowledges translation as corresponding to the original.

© 2025 The Author(s). Published by National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» & Yaroslav Mudryi National Law University.

This is an open access article distributed under Creative Commons Attribution License (CC_BY_4.0.0) allowing unlimited use, distribution and reproduction on any medium, subject to reference to the Author and original sources.

terminological inconsistencies and the lack of a unified concept on this issue hinder knowledge systematization in this area.

National Scientific Centre «Hon. Prof. M. S. Bokarius Forensic Science Institute» plays an indispensable role in studying this issue and proposes new approaches to developing the forensic doctrine of resistance to investigation. Developing basic principles of such a doctrine will contribute both to improving investigative methodologies and to increasing the efficiency of law enforcement practice in the face of modern threats.

Currently, the *Theory and Practice of Forensic Science and Criminalistics* Research Paper Collection is indexed in the following online databases: *Google Scholar* and international online databases: *Academic Scientific Journals Indexing*, *Bielefeld Academic Search Engine (BASE)*, *Central and Eastern European Online Library (CEEOL)*, *CORE*, *Crossref*, *Directory of Open Access Journals (DOAJ)*, *Directory of Open Access Scholarly Resources (ROAD)*, *ERIH PLUS*, *Eurasian Scientific Journal Index (ESJI)*, *Europub*, *Index Copernicus International*, *MIAR*, *RefSeek*, *ResearchBib*, *Ulrich's*, *WorldCat*, as well as in the Register of Scientific Publications of Ukraine and in DOI Foundation. The Research Paper Collection's electronic versions are posted on the Internet on sites such as the V. I. Vernadsky National Library of Ukraine, libraries of forensic institutions under the Ministry of Justice of Ukraine, institutions of higher education under the Ministry of Internal Affairs of Ukraine, etc. This facilitates the exchange of scientific developments between the Research Paper Collection's authors and researchers worldwide.

The research papers in this volume of *Theory and Practice of Forensic Science and Criminalistics* are divided into two groups: *Research Papers* and *Case Notes*.

The *Research Papers* Section is introduced by the *Admissibility of Evidence Obtained With Specialist Participation in Criminal Proceedings* research paper authored by **Yurii Chechil**, PhD in Law, **Victoriia Bila**, Doctor of Law, Docent, and **Stanislav Sheptukhovskiy**, PhD in Law (all from Ukraine). The authors analyze in depth conditions under which evidence obtained with the involvement of a specialist may be declared inadmissible. The authors consider a specialist's legal status, and the imperative nature of his/her involvement, which may contradict the principle of voluntary work. Emphasis is made on the paid nature of the specialist's work and potential conflicts with anti-corruption legislation (a ban on engaging in other paid activities for public servants) and labor law (a ban on engaging in forced labor, the issue of unequal pay for equal work). The researchers analyze the recent amendments to the Criminal Procedure Code of Ukraine (Arts. 71 and 214), which expanded the powers of specialists but also introduced restrictions, particularly regarding the involvement of foreign specialists, which is limited to cases involving weapons of mass destruction. The scientists underline the risks of a human rights violation and argue for a systematic review of the institution of a specialist in criminal proceedings.

In the following research paper, **Iryna Petrova** and **Hanna Spitsyna**, two Ukrainian Doctors of Law and Professors, highlight the critical importance of objectively appraising employees' professional levels in forensic institutions as a key staff management tool for improving efficiency within such institutions. The authors thoroughly analyze various methods of collecting information for appraisal, including the study of documents and other written sources, observation, and various types of interviews

(biographical, situational, and criterion). The principal tasks and goals of appraisal (informative, motivational, administrative), as well as fundamental principles of its conduct have been considered: publicity, democracy, objectivity, systematicity, and performance. The researchers point to the lack of a single universal methodology and the need for the development of individual appraisal programs adapted to the specifics of each institution. The key competencies to be evaluated (professionalism, work quality, resiliency, initiative, team player, and commitment to growth) have been identified and characterized. The scientists stress the importance of feedback and introduction of automated systems to enhance the efficiency and objectivity of appraisal.

The *Peculiarities of Circumstances to Be Established During Investigation of Criminal Offenses Related to Interference With Activities of Representatives of Public Authorities* research paper by **Volodymyr Popov** (Ukraine), PhD in Law, Doctoral Student, determines the peculiarities of the subject matter of proof, i.e., the list of circumstances to be clarified during the investigation into a specific group of crimes. The author analyzes criminal law elements of such acts under the Criminal Code of Ukraine, defines the range of victims, and peculiarities of the objective and subjective sides of crimes. The author proposes to divide the circumstances to be clarified into three groups: 1) circumstances revealing the mechanism of a criminal offense; 2) circumstances related to subjective characteristics of the person who committed offense; 3) other circumstances (procedural costs; causes and conditions which contributed to the criminal offense commission, etc.).

Mykola Kolomoitsev, PhD in Law, Doctoral Student from Ukraine, has delved

into complex issues of legal status of a lawyer involved in providing legal aid to a witness in criminal proceedings. The researcher points out that, unlike the status of defense counsel or victim's representative, there is normative uncertainty about this status within the National Criminal Procedure Code, necessitating further theoretical discussions and practical issues. The author analyzes various scientific opinions regarding the type of advocacy carried out by such a lawyer (defense, representation or other type of legal aid) and the scope of his/her powers, and substantiates the position that a witness's lawyer does not acquire a derivative procedural status from the witness, that is, does not have his/her rights: the basic function of his or her participation is to ensure the protection of interests and legal rights of the witness, to prevent violations of those rights, self-incrimination, or the use of psychological pressure against the witness. The researcher discusses specific rights of a lawyer specified in normative documents and considers it expedient to legally consolidate the status of a witness's lawyer. However, the idea of introducing a legal adviser for witnesses (legal adviser/counsel) was rejected as contradicting the current constitutional provisions on legal aid.

The *Forms of Specific Expertise Application in the Investigation of Economic Criminal Offenses: Possibility of Identifying a Non-Procedural Form* research paper authored by **Vitalii Usatii** (Ukraine), PhD in Law, Doctoral Student, justifies theoretical and practical expediency of defining non-procedural forms of specific expertise application along with procedural forms in the course of investigating criminal offenses related to economic activity. The author observes that only results obtained by employing procedural forms (forensic

examination, participation of specialists in investigative and search actions, and a specialist's opinion in proceedings on criminal misconduct) may possess evidentiary value, and at the same time emphasizes the importance of non-procedural forms (advisory assistance by specialists, information notes, preliminary analysis of physical objects, verification against forensic records, interrogations using a polygraph). The researcher highlights that although results received as a result of using these forms cannot be independent evidence or its underlying basis (to avoid admissibility of evidence), they offer significant guidance for presenting and verifying investigative versions, planning an investigation, determining the expediency of appointing forensic examinations, especially in complex business cases where understanding the specifics of financial transactions requires professional advisory assistance.

The *Forensic Classification of Criminal Offenses Related to Smuggling* research paper by **Yurii Kovalov**, PhD in Law, Doctoral Student from Ukraine, develops a forensic classification of criminal offenses related to smuggling. The author thoroughly explores different approaches to classifying crimes, including criminal-legal characteristics and forensic criteria, and validates the importance of considering them together. According to the author, the main classification criteria could be the method of implementing the criminal intent of smugglers, topic characteristics of smuggling, and the possibility of the spread and free circulation of contraband items is also underlined. Additional criteria can be: time, situation and place of commission of criminal offenses; tools and means used; some characteristics of smuggler personality or a group of smugglers, etc.

The following research paper *Forensic Characterization Elements of Criminal Offenses Committed by Professional Participants in Justice* by **Yevhen Sup** (Ukraine), PhD in Law, Doctoral Student, accentuates the importance of forensic characterization as information basis of the methodology for investigating crimes committed by professional participants in legal proceedings (judges, prosecutors, investigators, inquirers). The researcher points out that the issue of developing an appropriate forensic characterization becomes absolutely urgent due to insufficient study of these crimes in forensic science. The author substantiates key elements of forensic characterization structure and peculiarities of the criminal activity mechanism in this area (method and circumstances of committing a criminal offense, criminal identity, tools and means of committing a criminal offense, as well as typical traces). The scientist notes that such elements as information about the identity of the victim and the subject of the offense are optional since not all crimes of this group directly encroach on a specific person or physical object.

The *Countering Investigation as a Substantive Component of Topic of Criminalistics* research paper by **Oleksandr Tarkan**, PhD in Law, Doctoral Student from Ukraine, elaborated on such a phenomenon as countering investigation in the context of formation of a separate forensic doctrine of such resistance and its neutralization (overcoming). The need to expand the system of forensic science doctrines and theories, considering the post-criminal activity of subjects involved in criminal offenses, is justified. The researcher emphasizes the relevance of singling out the forensic doctrine of countering investigation by criminals and its neutralization. Prospects for further research are outlined

that provide for development, improvement and verification of key provisions of the doctrine of countering investigation and its neutralization (taking into account requests and issues of law enforcement activities).

The *Fundamental Principles of Forensic Expert Activity and Psychological Science in Service of Resolving Forensic Psychological Examination Tasks* research paper by **Oleksandr Yeysiukov** (Ukraine), PhD in Education, Docent, Doctoral Student, is devoted to a theoretical and legal analysis of fundamental principles of expert activity provided for in the Law of Ukraine *On Judicial Examination* (legitimacy, independence, objectivity, completeness) and the basic principles of psychological science (determinism, reflection, unity of psyche and activity, development, and systemic nature). The author demonstrates the importance of supplementing Ukrainian legislation with the rule of law principle. The researcher provides an in-depth analysis for aspects of implementing the identified principles and, on the basis of an integrated approach, proposes a system of principles specifically for forensic psychological examinations. This system will be capable of synthesizing the principles of forensic science and psychology while supplementing them with the principle of a forensic psychologist's professional ethics.

The *Overview Related to Exhumation of Animal Corpses: Theoretical, Legal and Organizational Principles* research paper authored by **Ivan Yatsenko** (Ukraine), Doctor of Veterinary Medicine, Professor, delves into a comprehensive analysis of problematic issues and the development of principles for the exhumation of animal corpses as an investigative (search) action. It is stressed that there is a lack of proper legal regulation for this procedure in the well-established legislative framework of Ukraine,

which may raise doubts about the admissibility of evidence obtained in cases regarding animal cruelty, etc. The researcher offers his definition of the *exhumation of animal corpses* concept, outlines exhumation objects (whole corpses, remains, aborted fetuses), and actual grounds for conducting it (the need for new research, suspicion of violent [sudden] death, conflicting expert data, etc.). The scientist specifies stages of the algorithm for conducting an examination related to exhumation of animal corpses and elaborates on their content: from issuing a resolution and identifying participants (investigator, prosecutor, veterinary medicine specialist, witnesses, specialists of the State Service for Food and Consumer Protection) to technical removal of the corpse, its on-site examination, sampling, drawing up an examination protocol, transportation to an expert institution, and subsequent burial of the animal corpse or cremation, and proposes to supplement the national criminal procedure legislation with a new article that would regulate this procedure.

The *Case Notes* Section begins with the *Comparative Analysis of Smart Lock Breaching Methods and Their Forensic Examination in Ukraine and the USA* research paper by **Roman Pidnebennyi**. The article explores the nuances of smartlock markets in both countries (popular smart lock brands, common authentication methods) and singles out the main hacking methods (from digital attacks to traditional methods of physical hacking). Outdated software and power outages, a shortage of cybersecurity experts, a lack of unified methods for analyzing digital evidence, limited access to specialized equipment, and insufficient legal framework for electronic evidence were among the issues encountered during the forensic examination of smart lock hacking in Ukraine.

The *Electromagnetic Weapons: Forensic and Ballistic Examination of Railguns and Coilguns* research paper authored by **Görkem Ardacan Tan** (Turkey), explores forensic and ballistic aspects of the state-of-the-art types of weapons: electromagnetic guns using electromagnetic fields to accelerate projectiles to ultra-high speeds, as opposed to traditional firearms. From the researcher's perspective, the lack of gunshot ballistic traces (chemical residues of gunpowder, cartridge cases) is a key forensic issue when examining such weapons. The author analyzes technical and physical properties of electromagnetic guns, damage they cause, methods for researching them, and the need to amend relevant international and national regulations on proliferation and research of these and similar weapons.

The research paper authored by **Anatolii Puhachov, Valerii Suprun, Ruslan Huseinov**, comprehensively analyzes existing fire hazards in various types of motor vehicles and methods of their forensic examination. The authors emphasize the high fire hazard of vehicles due to the presence of flammable and combustible materials (fuel, oils, plastics, rubber, textiles), potential ignition sources (electrical equipment, exhaust gas systems, friction-heated elements), and provides relevant statistical data on vehicle fires and their main causes, which are dominated by electrical and fuel system malfunctions. The researchers have thoroughly examined the mechanisms behind the occurrence of a fire: short circuit, overheating of conductors, leakage of fuel or other liquids (antifreeze, oil) onto hot engine parts (manifold, turbocharger), sparks during a traffic collision, careless handling of fire in the course of repairs. A distinction is made between signs of deliberate arson (using flammable liquids

to intensify combustion) and fires caused by technical malfunctions. The algorithm for inspecting the fire site, the method for determining probable source of the fire according to the degree of thermal damage to various zones (engine compartment, cab, trunk), analysis of the condition of glazing, wiring, etc., are provided in the study. The scientists define specific risks and peculiarities of combustion of lithium-ion batteries in electric and hybrid vehicles.

The *Improvised Incendiary Device Components* research paper authored by **Mykhailo Kuzmenko** (Ukraine) highlights the lack of definition for improvised incendiary device components in current methodologies and reference literature which hinders the conduct of forensic fire and technical examinations, specifically the identification of a specific source of ignition, leading to probable conclusions and the inability to determine the cause of a fire. The relevance of the issue is amplified by the increase in the use of improvised incendiary devices amid martial law in Ukraine. The author differentiates components of such devices into basic (combustible substance, ignition device) and complementary (body, batteries, switches, target sensors, etc.), and examines in detail types of combustible substances (flammable liquids, pyrotechnic components) and ignition devices (mechanical, electrical, chemical, including clockwork, mobile phones). The researcher notes that defining the overall structure, relationship, and operating principle of these elements will facilitate the development of methodologies for their investigation and contribute to more effective resolution of arson-related crimes.

The last section of the 38th issue of the *Theory and Practice of Forensic Examination and Criminalistics* Research Paper Collec-

tion traditionally outlines notable scientific events in the first quarter of the year. The Editorial Board stresses the importance of researchers' participation in national and international forums. Despite the war, this has demonstrated the unwavering strength and resilience of Ukrainian science.

The Editorial Board would like to thank the authors who have provided materials for publication, as well as to all those

involved in making this scientific edition possible! We invite scholars and practitioners from various institutions and welcome the opportunity for further cooperation. We are dedicated to the continued support and development of scientific dialogue. We are convinced that working together is a guarantee for future scientific accomplishments!

Together to the Victory!
Glory to Ukraine!

Simakova-Yefremian, E. (2025). Forensic Activity as a Component of the Fight Against Obstruction of Justice. *Theory and Practice of Forensic Science and Criminalistics*. Issue 1 (38). P. 5–11. DOI: 10.32353/khrife.1.2025.01.