



II International Students'
Forensic Conference
50 sides of crime

Abstract Book

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4th – 5th December 2020

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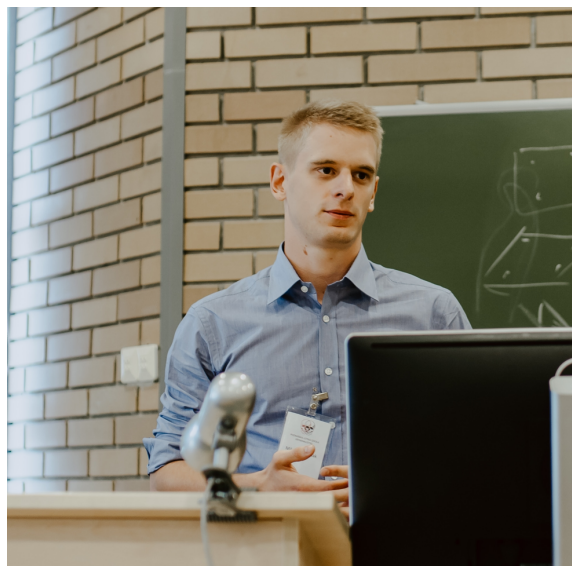
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Friday 4th December 2020

- 10:00 – 10:10 **Opening Ceremony**
Associated Professor UAM Agnieszka Ludwików
- 10:15 – 11:15 **Plenary lecture**
PhD David Ballard
- 11:15 – 11:30 **Genetic predisposition of dog's breed to work on duty**
Jakub Winkler-Galicki
- 11:35 – 11:50 **DNA Fingerprint**
Paula Paczeńska, Aleksandra Wojtkowiak
- 11:55 – 12:10 **Luminol with blood - mystical blue light or regular chemical test?**
Importance and implications of chemiluminescence effect in forensic science
Kacper Choromański
- 12:15 – 12:30 **Forensic Identification of Human Remains from Mass Graves - Potential of Genetic Methods**
Katarzyna Zdeb, Judyta Bąk
- 12:45 – 14:00 Dinner
- 14:00 – 14:15 **The Self-Administered Interview: A memory-enhancing method of interviewing eyewitnesses**
Agata Ochendal
- 14:20 – 14:35 **Interpreting Nonverbal Communication in Criminal Science**
Paulina Walczak
- 14:40 – 14:55 **Risk of active shooter's attack in Poland**
Mikołaj Woźniak
- 15:00 – 15:15 **Crimes on the cryptocurrencies - legal aspects**
Eliza Filipiak
- 15:20 – 15:35 **Forensic problem of the perpetrator's modus operandi after committing the crime of murder**
Katarzyna Mróz
- 15:40 – 15:55 **New psychoactive substances - comments on the amendment to the Act on Counteracting Drug Addiction**
Aleksandra Skotnicka
- 16:00 – 17:00 **Plenary lecture**
Professor Petra Urbanova

Saturday 5th December 2020

- 9:00 – 9:15 **Remote sensing methods in Forensic Archaeology**
Kuba Łada-Siwiec
- 9:20 – 9:35 **Possibilities of using geophysical methods in searching for hidden corpses**
Katarzyna Zdeb, Jacek Adamiec
- 9:40 – 9:55 **The "body farm" in the Ticino Park - botanical evidence on skin and hair**
Gulia Caccia
- 10:00 – 10:15 **The age estimation related to illegal minors in forensic practice**
Monika Głabińska
- 10:20 – 10:35 **What is Forensic Archeology? A brief history of development in the United States and Poland**
Kuba Łada-Siwiec
- 10:40 – 10:55 **Evidence from neuroscience as an example of scientific evidence in criminal proceedings - selected issues**
Aleksandra J. Lewandowska
- 11:00 – 12:00 **Plenary lecture**
PhD Daniel Angelo Gaudio
- 12:00 – 13:00 Dinner
- 13:00 – 13:15 **Forensic photography as one of the methods of recording procedural activities in the static phase of the examination**
Sylwia Adamczyk
- 13:20 – 13:35 **Online sextortion – criminal law aspects**
Agata Ziobroń
- 13:40 – 13:55 **The possibilities of forensic garbology use by Law Enforcement Agencies**
Błażej Stromczyński
- 14:00 – 14:15 **Can social media heat up cold cases? An analysis of law enforcement engagement**
Stanisław Rabczuk, Hubert Dębniak
- 14:20 – 14:35 **Polish victims of state-sponsored or inspired activity in cyberspace – forensic analysis**
Piotr Słowiński
- 14:40 – 14:55 **Crime in e-commerce payments and methods of its prevention**
Mateusz Józefowski
- 15:00 – 16:00 **Plenary lecture**
Mikołaj Woźniak, Mateusz Orczykowski
- 16:00 – 16:30 **Closing Ceremony**

Genetic predisposition of dog's breed to work on duty

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key words: police dog, breed, aggression, fear, forensic, DRD4,

The history of dogs in Police or military service is thought to initiate already in the 14th century. This tradition is continued up to date and new implementation of canine force in Police, Rescue teams and / or Fire brigades constantly evolving. To the most common dog's unit applications belong: drugs, explosive materials, guns, humans, cadavers searching, protecting, crowd controlling, and combat. What is more, on duty different kinds of the breed can be found. To the most common once belongs German Shepherds, Belgian Malinois, Bloodhound, Dutch Shepherd, and many different breeds found as useful in particular cases. Currently there are no molecular or biological tools that aid to select of dogs in context of their abilities and even though that dogs are going through restricted selective processes it is really difficult to establish the level of aggression or fear at the beginning of recruiting processes and because of that determine if the individual should be trained more in aggression to be a defensive and offensive dog or to work with smells. That is why it seems to be needed to develop genetic tools allowing us to determine skills of interest in dogs at early age.

The main purpose of the speech is to show the possibility of using analyses of several genes (*DRD4*, *HTR2B*, *IGF1*, and *MHGA2*) to establish a potential way of determining a dog's abilities. What is more, the author wants to describe also potential usage of genetic panel to determine health, developed in canines which age, problems basing the problem on the Iraqi police dogs' case.

DNA Fingerprint

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key words: DNA profiling, forensic genetics, molecular markers

At the turn of the 1980s and 1990s, after the discovery of the double helix structure of DNA by Watson and Crick, significant progress was made in the analysis of biological traces. At that time, a new field of science called forensic genetics was created, which made a significant contribution to human identification methods. So-called DNA profiling (DNA fingerprint) is based on the analysis of highly variable regions of the non-coding part of deoxyribonucleic acid and enables comparison of a person's DNA with genetic material found at the scene. Profiling is used to analyze the family relationship, determine the identity of missing persons and assess the likelihood of a suspect's involvement in a crime.

Forensic genetics is based on using molecular markers, i.e., minisatellite and microsatellite sequences present in the human genome, such as VNTR (*variable number of tandem repeats*) or STR (*short tandem repeats*). They use the phenomenon of DNA polymorphism, which is detected by sequencing, restriction enzyme cutting (PCR-RFLP) or hybridization with DNA probes.

The great progress in genetics is a result of research on the encoding region of deoxyribonucleic acid, which provides a description of the perpetrator's phenotype. Using the polymorphism of single SNP-type nucleotides it is possible to obtain information about the general physical structure or even characteristics of the auricle of a person.

To sum up, DNA profiling methods based on analysis, of both the encoding and non-coding parts of DNA, bring forensic geneticists closer to a quick and reliable discovery of a person's identity.

Luminol with blood - mystical blue light or regular chemical test? Importance and implications of chemiluminescence effect in forensic science

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key words: luminol; chemiluminescence; blood; bloodstain pattern analysis; crime reconstruction; forensics

Bloodstain enhanced by luminol effect that gives blue light is a signature move for most of the forensic tv series. It's useful, but how is it really done in crime-solving reality? What are the problems that are connected with this procedure? What are the best types of documenting chemiluminescence effect? What are the common mistakes made during this procedure? What kind of information experts can conclude based on luminol effect enhanced evidence?

The presentation will cover those topics. The author will present real crime scene photos and will introduce an audience basic principles of using luminol during homicide crime scene investigation.

The presentation was prepared as a result of an extended research study of the methodology of chemical enhancement bloodstains for “PRELUDIUM 16” research project, ref. no UMO-2018/31/N/HS5/01031, financed by the National Science Centre, Poland.

Forensic Identification of Human Remains from Mass Graves - Potential of Genetic Methods

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key words: DNA, forensic archeology, soldiers

Archaeological and forensic works meet in the current of forensic archaeology. Research in the field of forensic archaeology concerns, inter alia, research that leads to obtaining information about people found. The common denominator in both cases is the attempt to identify people who are discovered in mass graves and to identify unknown victims (NN) and to know the identity of victims of mass disasters.

Archaeological works also began to cover the modern period, including the First and Second World Wars and the period of totalitarianism. Identifying the people in this case is extremely important as the relatives of the victims may still be alive. Introducing this method to historical research, and then analyzing the results, makes it possible to obtain new, additional information, including getting to know or approximate the identity of the exhumed people. Samples taken from exhumed bones are used for analyses. Appropriate collection and protection of the sample may positively influence the research conducted and provide new, interesting discoveries. The paper presents examples of genetic tests carried out on the remains of soldiers discovered near Bolimów and Urszulin.

The Self-Administered Interview: A memory-enhancing method of interviewing eyewitnesses

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key words: interview, memory, multiple eyewitnesses, testimony

Some types of crime may generate multiple eyewitnesses. In particular, at the scene of a terrorist attack or a traffic accident can be a large number of witnesses who may provide investigators crucial information about the incident. Due to the limited police resources, it is not always possible to interview everyone immediately after the event. Unfortunately, delay between witnessing crime and giving testimony is unavoidable in such circumstances. During this time, memory is prone to post-event information and forgetting. After a few weeks witnesses may no longer be able to provide high-quality testimony. In response to this problem, three psychologists, F. Gabbert, L. Hope and R. Fisher, have created a memory-enhancing method of interviewing eyewitnesses, called the Self-Administered Interview (SAI).

It is a paper booklet that enables witness to provide initial account prior to the full statement. This investigative tool preserves and protects eyewitness memory for a subsequent personal interview. The Self-Administered Interview is based on the Cognitive Interview mnemonics. It contains various memory retrieval techniques and open-ended questions.

The purpose of the presentation is to show potential benefits and limitations of using the Self-Administered Interview booklet.

Interpreting Nonverbal Communication in Criminal Science

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key words: nonverbal communication, forensic, security, communication

Nonverbal communication and understanding and interpreting such kind of communication and the impact of it put on the security services workers and the implication of nonverbal communication in forensic and security are goals of the following speech. The main objective of the speech is: defining nonverbal communication; interpreting and differences between both verbal and nonverbal communication and potential application of that kind of knowledge in forensics. What is more in the speech the forensic is defined and characterized in order to nonverbal communication. Furthermore, the main forensic entities in Poland were described.

All these analyses were performed to demonstrate the necessity of nonverbal communication interpretation in analyses of crime and for forensics. The most crucial part of the speech is the analyses of the practical implication of nonverbal communication in forensic in different situations such as interrogation, profiling, and recognition of potential perpetrators, terrorists. The proper nonverbal communication of the officials was also demonstrated in the speech. The lecture is having a semi theoretical character and is demonstrating the impact of nonverbal communication on the Security sector and officials.

Risk of active shooter's attack in Poland

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key words: active shooter, terrorism, terrorist attack, personal security, anti-terrorism, counterterrorism, risk

Active shooter's attack is very serious threat for personal security. That kind of aggressor has one main goal - kill as many people as possible. Andres Braivik in Norway or Brenton Tarranta in New Zeland were accidents which shocked the western world. In the past active shooter's scenario were closer for Middle East where radical terrorist groups are very active but currently all is different. According to some expert's opinion that kind of attack is possible in all places in the world.

The main question of that speech is "what is the risk of active shooter's attack in Poland?". Is Poland the green island and we are definitely safe or maybe that threat can meet us in our neighborhood? The purpose of the prelection is to find out if there exist present factors which make Poland as a target of active shooters and describe subject responsible for predicting that threat.

Crimes on the cryptocurrencies - legal aspects

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key words: blockchain, cryptocurrency, money laundering, Bitcoin, Darknet, scam ICO

The cryptic market and the blockchain technology behind it are places where it is relatively easy to engage in criminal activity today. Today, it is a grey area in most legal systems. Given the rapid development of this technology, it is not surprising that regulators are trying to keep up with it, as laws and regulations change only gradually. It seems that the problem of cryptovalent market fraud is now a key issue which, on the one hand, attracts criminals but also deters potential investors. At present, the approach of regulators on the international scene varies from a total ban on crypto trading in Iran to progressive regulation in Malta.

On the basis of recent events, activities such as money laundering using anonymous Monero blockchain transactions, ICO scam fraud, banking man in the middle attacks and illegal transactions in Darknet are gaining popularity. It is therefore worth raising this issue and dispelling existing legal questions and doubts about the development of this market.

Forensic problem of the perpetrator's *modus operandi* after committing the crime of murder

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key words: murder, criminal responsibility, perpetrator

Behavior of the offender before, during and after the commission of a crime, i.e. a *modus operandi* in the broadest sense, is of vital importance criminalistics and criminal law. Undertaking actions aimed at concealing a crime or changing the nature of an event is connected with the offender's natural desire to avoid criminal responsibility for the committed act. The subject of the speech is to discuss the scope of the perpetrators' actions after committing a murder offence and the methods developed by law enforcement authorities to ensure the disclosure of such acts.

The judgments of the common courts in this area are an asumpt to consider the possibility of committing an excellent crime. The considerations will be complemented by a case study on the forensic *modus operandi* of the perpetrator.

New psychoactive substances - comments on the amendment to the Act on Counteracting Drug Addiction

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key words: new psychoactive substances, designer drugs, counteracting drug addiction

By the Act of 20 July 2018 amending the Act on counteracting drug addiction and the Act on the State Sanitary Inspection, the legislator changed the legal definition of new psychoactive substances (so-called designer drugs) and penalized the behavior of their possession. As a result of the amendment adopted on July 1, 2015, two definitions are used to define "designer drugs" in Polish criminal law - a substitute and a new psychoactive substance.

The presentation is aimed at discussing the amendments, the differences between the substitute and the new psychoactive substance, the issues of identifying these substances, and presenting critical comments on the amending act.

In the first part of the presentation, I will analyze *the ratio legis* of the introduced changes. The changes proposed in the draft act were aimed at introducing new psychoactive substances into an analogous control as narcotic drugs and psychotropic substances. The project initiator decided that due to the rapid pace of appearance of hazardous substances, their list should be specified in the ordinance, where the time necessary to carry out legislative work is shorter than in the case of changing statutory regulations. Such regulation, according to the legislator, enables more effective and faster protection of the society against these substances. This solution will be discussed from the point of view of the requirement of specificity of criminal regulations (*nullum crimen sine lege certa*).

Then, I will present the basic differences between the substitute and the new psychoactive substance and the issues of their identification. I will discuss the criminalisation of a prohibited act of the possession of new psychoactive substances and the penalty for such behavior, which is lower than in the case of the possession of drugs.

There is no doubt that the existence of the so-called NPS poses a significant threat to public health and statutory regulation of this issue is necessary. According to the data of the project initiator, the number of poisonings in Poland before the entry into force

of the amendment remained at the level of about 300 per month. However, it is impossible not to notice many faults of the existing regulation, which I will highlight in the speech.

Remote sensing methods in Forensic Archaeology

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key words: archaeology, forensic archaeology, forensic sciences, remote sensing, ALS - airborne laser scanning, mass graves detection

Remote sensing methods allow collecting information about an object from a greater distance, those methods are, for example: aerial images, ALS – airborne laser scanning.

Forensic Archaeology is a domain used for detecting hidden bodies, exhumation, documentation purposes, and recovering evidence also it is used to recreate the past – to find out what happened at the crime scene. Some crimes like genocide during war periods don't expire according to international law. The prosecution of criminals is held by law enforcement agencies till today. The second world war was the biggest conflict that resulted in the most severe genocide – POW camps, death camps, executions, and murder of civilians led by Nazi forces. War caused a great number of the single pit and mass graves. In this context, a question arises. Is it possible to use ALS data to search and identify war crime graves? Light detection and ranging – LiDAR, allows us to scan the surface of the earth and generate a Digital Terrain Model, this model processed in a specific way for archaeological purposes allows to search for indicators like pits, trenches, collapsed earth, elevations. Once an institution like Pomost or IPN exhumes bodies there is strong evidence of war-related graves. Using archival aerial photographs on earlier mentioned locations, as a proven method for identifying grave marks, it is possible to verify ALS data. In order to show the possibilities and limitations of this method, a number of cases have to be presented with a critical reflection. Indicators of graves are possible to detect during prospection, but in very few cases, one of them is death pits from Jewish cemetery in Łódź. Other examples show confirmed graves from Stary Grodków or Głogów but the results vary from sufficient to arguable.

Summing up, the following claim shows the difficult answer – The results may depend on the specifics of each archaeological site. Every grave site has to be treated like a case study. It is possible to show positive identification using ALS. However, the vast majority of sites are covered by forests or vegetation and those may be impenetrable obstacles for laser beams

and cause some disturbances or poor quality of models, hereby extra caution is strongly suggested in order to interpret existing objects. If possible, it seems to be worth to derive Digital Terrain Models from airborne laser scanning carried out in winter or early spring to avoid leaf growth and low vegetation.

Possibilities of using geophysical methods in searching for hidden corpses

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key words: geophysical methods, GPR, forensic archaeology, human remains

Geophysics may assist in the search of bodies for human by surveying large areas rapidly and identifying targets or environmental hazards while searching for human bodies. Geophysical techniques, such as ground-penetrating radar (GPR), have been successfully used by law enforcement agencies to locate forensic evidence and single or mass graves. In this presentation will present the possibilities and limitations of geophysical methods for forensic searches on the basis of research in the field of forensics and forensic archaeology. Examples of the results of GPR surveys for the location of graves, coffins and human bodies will be presented. Negative examples were also selected when geophysical surveys did not allow finding human remains.

The "body farm" in the Ticino Park - botanical evidence on skin and hair

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key words: forensic botany, skin, hair, body farm

Environmental traces can be a valuable resource for identifying places, times and subjects involved in a criminal event. However, the routine sampling of the cadaver in search of these traces is still not very widespread. For this reason, the awareness of the research of this kind of traces, in particular of botanica ones, must increase amongst representatives of the Forensic Scientific Community as well as the potential and limits of the different human substrates.

A series of 8 samples, consisting of one piglet and 10 locks of hair, have been placed in a large natural park, the Ticino Park: 6 in a wooded area and 2 in a grassland. The latter were moved to the wooded area after 3 days. All the samples stayed in the environment for over 8 months. During this interval 10 samplings were carried out through a survey of the surrounding vegetation and of the corpses in terms of body preservation and environmental contaminants (especially botanical).

Environmental footprint increasingly marks the samples starting from 48 hours after placement, the grassy environment is no longer identifiable after 11 days post movement in woodland, botanical evidence allows a sub-seasonal and intra-environment characterization of pigs. Skin proves to be poorly persistent; it disappears between 15 days and 1 month; however, certain areas undergo conservative processes thanks to the local environmental conditions. The accumulation trend of botanical elements on skin is interrupted with the disappearance of the substrate and restarts on the underlying one (bones). Skin retains all types of botanical traces. On hair locks, on the contrary, the accumulation trend is not interrupted due to the great preservability of the substrate; however, it is a selective substrate that retains only specific types of botanical elements.

As outlined, forensic botany can provide information that, even if only circumstantial, can certainly shed light on many of the classic queries that judicial investigators advance.

However, this information requires a careful analysis and sampling of all available substrates. Having highlighted the different characteristics of persistence and selectivity of skin and hair, it is clear that only their combined exploitation can allow the collection of the complete pool of information.

The age estimation related to illegal minors in forensic practice

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key words: age estimation, forensic, skeletal age, dental age

The Convention on the Rights of the Child has been signed in 1990 by 193 United Nations member nations. It stipulates that States Parties shall respect and ensure the rights of each child within their jurisdiction without discrimination. The convention stipulates that any person under the age of 18 should be considered a minor.

EU regulations on the asylum of minors are extremely important as they affect one of the most vulnerable groups of people. Member States have specific obligations towards minors.

EU countries must guarantee them access to all possible assistance, especially if minors have been victims of any form of abuse, inhuman and degrading treatment, neglect, exploitation, torture or cruelty. This is the reason why minor identification and age assessment procedures are considered an essential task of forensic experts. The need to estimate the age arises when individuals claiming to be minor have no valid identity documentation to evidence their assertion. Age estimation of the living additionally can be required in cases concerning individuals who deliberately falsify their birth year to, for example, achieve the required age enlist in the military, legally marry or receive financial assistance.

The procedures include age assessment based on skeletal and dental maturation (relying on X-rays of the hand or collarbone, dental x-rays), observation of sexual maturation, geographical origin and the psycho-social interview, if possible.

The study material consisted of cases involving skeletal and dental age assessment and observation of sexual maturation performed in the Department of Forensic Medicine Poznan University of Medical Sciences. One case involved the assessment of age of a person of unknown date of birth (victim of human trafficking and sexual abuse) and two other cases involved age estimation because they did not have any identity documents.

What is Forensic Archeology?

A brief history of development in the United States and Poland

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key words: archaeology, forensic archaeology, forensic sciences

The development of Forensic Sciences in the 20th century turned law enforcement agencies towards scientific methods and approaches in order to acquire evidence from criminal investigations in more professional manner – to gain hard evidence or, a “smoking gun”. This whole process of change was started from a simple yet accurate observation – criminal evidence is gathered in an unprofessional, destructive way and later on it can’t be used in law courts as useful, undoubtful, objective, scientific.

Many police homicide investigations were followed only by regular police department workers. In order to find, locate a body, or to excavate it there were no specially trained forces. Police on their own had to gather dead bodies/bones, document the crime scenes, etc. Without any training, the results were: no documentation or unprofessional one, damaged evidence, missing parts or evidence, no ethics for human remains. The pioneer of Forensic Archaeology is dr Dick Ping Hsu, he was the first to use archaeology to excavate a homicide victim, later it started to shed a light on useful archaeological methods for criminal investigations. Then an article appeared in 1976 *Forensic Archaeology* by D. Morse, D. Crusoe, H. G. Smith it was the first official manifest of Forensic Archeology. The paper criticized law enforcement agencies for their mistakes and non-scientific approach, but what more important, the authors proposed an alternative – it was to make use of archeologists and their methods in criminal investigations. Even as years passed by, no one seemed to be aware of the practical use of archeological methods in crime. FBI started from the 1970s to obtain several scientific innovations in their training programs and papers. Then the year 1983 and the first book *Forensic Archeology* was written not to criticize but to make it possible to learn archaeological methods for law enforcement agencies. The first results of archeologists “interrogating the ground” were a revelation and an eye-opener. Law enforcement agencies started to obtain non-invasive methods from archaeology, but the boom started in 1993 leading to highly

sophisticated and advanced devices as metal detector, ground-penetrating radar, light detecting and ranging, thermographic imaging, and many others.

The background in Poland for using archeology in investigations was the Katyń massacre in 1940. It was the first time that a group of scientists was hired to investigate this crime of genocide in 1943 when exhumations of mass graves began. Forensic Sciences in Europe started to develop from this dark moment on. There was no archaeologist amid the scientist in 1943 but eventually, many years later they joined the cause.

In Poland, a Ph.D. thesis from 1974 by Tadeusz Sojka in chapter *Archeology as criminalistics and criminalistics as archaeology* demonstrated methods that can be of service in reconstructing the past for both domains - archaeology and forensic sciences. The mentioned chapter was about Nazi POW camp in Żagań, how to locate graves, excavate them, and recover documents. It was the first statement of Forensic Archaeology in Poland and probably in the world. This paper was soon forgotten, and archaeology was used again from the 1990s only as a narrow method for excavating fallen soldiers from the second world war. The end of the 90 started to change the understanding of archaeology but the 2000s decade reinvented it as *Forensic Archeology - Archeologia Sądowa* defined the domain and showed its possibilities as a tool helpful in searching, detecting, recovering, and documenting human remains in order to recreate the past at the crime scene.

Evidence from neuroscience as an example of scientific evidence in criminal proceedings - selected issues

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key words: scientific evidence, neuroscientific evidence, law of evidence, rules of evidence, criminology, forensic science,

While law and neurosciences are an increasingly popular academic discourse, so far little research has confirmed how neuroscience evidence is used by law. Scientists and lawyers have different standards and methods for assessing such evidence. The diversity of its interpretation provokes controversy over whether this type of evidence should be admitted in law and whether at all. On the one hand, the progress in neuroscientific research is optimistic towards a more precise understanding of the etiology of criminal behavior and the development of more effective therapeutic methods for offenders whose crime is related to their disorders. On the other hand, the interpretation of the results of neuroscience research, using them in court, and finally generalizing them to larger groups of potential offenders may be questionable. Moreover, the inclusion of neuroscience research in legal proceedings requires considerable changes in many legal systems for which these systems are not yet prepared. The aim of this speech is to show concrete examples as well as the challenges and risks of using neuroscientific evidence in criminal proceedings.

Forensic photography as one of the methods of recording procedural activities in the static phase of the examination

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key words: forensic science, forensic photography, crime investigation

Forensic photography in criminal science is a system of photographic methods and equipment used to record material evidence during investigative, operative-search actions and for the purpose of expert examination of such evidence in court. The role of the forensic photographer is vital, as a good skill in photography with updated knowledge of the techniques and methods involved is required for proper documentation of evidence.

There are many things that a forensic photographer can photograph. A few examples include the body of the victim, shell casings, or broken glass. What's more, a forensic photographer might be asked to photograph injuries on a victim who is alive and was attacked. The role of the forensic photographer is essential, as a good skill in photography with updated knowledge of the mechanics and techniques involved is required for proper documentation of evidence.

The presentation discussed the division of forensic photography, basic equipment for crime scene photography and also a lot of different methods. There was also a briefly analyzed history of photography and the procedure for proper documentation. Moreover, photographing specific crime scenes were explained. The project compared analog and digital image recording techniques as well as traditional photochemical techniques. In addition, there were considered features of crime scene photography.

Online sextortion – criminal law aspects

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key words: sextortion, blackmail, pornography, sexual acts, pedophilia

According to the definition provided by FBI, sextortion is ‘a serious crime that occurs when someone threatens to distribute your private and sensitive material if you don’t provide them with images of a sexual nature, sexual favors, or money’. Sextortion is definitely a remote sexual assault and a form of cybercrime. In the presentation I would like to analyze the acts included into that definition in the context of currently existing provisions of the Polish Criminal Code, like blackmail (article 191 § 1 k.k.) or sexual exploitation of critical position (article 199 k.k.). I want to provide some information on forms of sextortion like manipulating victims through social media or hacking (article 267 k.k.).

Moreover, I aspire to provide some information on the scale of the phenomenon among the minors, which leads to some remarks on paedophilic crimes. Also, I want to consider that behaviour in the context of pornography-related crimes (article 202 k.k.) or dissemination image of a naked person (article 191a k.k.). Beside this, I would like to present psychological effects of sextortion and criminological aspects referring to the perpetrator.

The possibilities of forensic garbology use by Law Enforcement Agencies

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key words: garbology, TRASHINT, trash pull, dumpster-diving

The Merriam Webster dictionary defines garbology as ‘the study of modern culture through the analysis of what is thrown away as garbage’. In order to emphasize the objective of gathering information from trash for intelligence purposes, the terms ‘forensic garbology’, ‘trash intelligence’, or ‘TRASHINT’ were created. According to Mijalkovic, ‘trash intelligence is a slang term for the activities of gathering intelligence findings by searching, obtaining, and analyzing the contents of garbage and waste left behind (made or disposed of) by persons who are the subject of intelligence and security processing, i.e., users or holders of relevant intelligence findings’.

Collecting information through garbage search is used by Intelligence Agencies and Law Enforcement Agencies. The examples of such activities taken by Police Officers in the United States will be presented. The short analysis of case law, including US Supreme Court judicial decisions concerning admissibility of such actions and evidence gathered will be delivered. Also, the possibilities of TRASHINT use by Polish Police will be discussed.

Can social media heat up cold cases? An analysis of law enforcement engagement

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key words: social media, law enforcement, cold cases

The importance of social media is growing worldwide – both in private, as well as in public sector. Law enforcement agencies try to get advantage of new possibilities that come with social networking sites (“SNS”). It may be used as an investigative tool, that may assist both current and cold cases. Due to variety of valuable information that are posted by users on SNS the importance of social media intelligence is emerging, especially in those cases where perpetrator still remains undetected.

As of 30th September 2020, the most popular Polish official social media profile of Police Province Department – Wielkopolska Policja – has been followed by over 46.000 users. During ongoing analysis of users’ engagement, it has been identified that posts containing information about unsolved cases were the most popular on the Wielkopolska Policja’s profile – average range was of over 103.000 users, while engagement rate (interactions with post, shares, comments) was 14.500 at average. Can Police get advantage of such great public interest related to cold cases?

The aim of the presentation is to describe how Police may utilize social media intelligence in cold cases. Furthermore, it presents preliminary results of posts analysis on selected Polish Province Departments profiles, with particular emphasis on those concerning unsolved cases.

Polish victims of state-sponsored or inspired activity in cyberspace – forensic analysis

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key words: cybercrime, cyberespionage, state-sponsored, state-inspired, forensic science, digital forensics

State-sponsored or state-inspired activity in cyberspace is also called in Advanced Persistent Threat (APT) activity. It may take any shape or form, from typical cybercrime activity (scams, theft, hacking etc.) to complex cyberespionage employing various different tactics and techniques. It is currently recognized as one of the most dangerous, as the perpetrators are becoming more and more technically sophisticated and the implications of their actions are more severe with every year. Such activity does not necessarily affect — as one may imagine — only government, law enforcement or military institutions. Over time, APT activity influences and enters our daily lives — our computer may be a part of botnet flooding government servers. It is also possible that we will be unable to access our bank accounts due to a state-sponsored actor attack on our country networks and systems. Such an activity implicates the complexity of investigations. New challenges emerge for digital forensics to effectively attribute the attacks.

In the proposed presentation I would like to present forensic aspects of techniques, tactics, and procedures utilized by the state-sponsored or inspired actors in general and in the specific case study — Lazarus Group activity (associated with North Korea) directly affecting Poland in 2017. Presented will be methods used by the perpetrators to gain access to the victims' devices or networks, malware used at every stage of the attacks and type of evidence discovered. These discoveries allowed to identify potential perpetrators and attribute the attack to them. Presentation will include a summary of implications of APT activity and possible predictions of future developments in this area, both in terms of attack vectors and challenges for forensics.

Crime in e-commerce payments and methods of its prevention

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key words: cybercrime, online payments, scam, online safety, PSD2, fintech

In the last few years a lot has changed in online shopping– from transferring transactions via Polish Post form, or sending transfers slower than ‘elixir’ to making a transfer which is on the other bank account even in few seconds – using for this our watch, fingerprint, or eye/face scan. New possibilities for sellers, and buyers mean new opportunities to hackers, scammers, and a whole bunch of dishonest people online – waiting for a moment of our inadvertence to rob us in many ways. Today we have many options to pay for goods over the internet – and many of them are more protected than traditional bank account transfer – but not everyone is aware of it.

In 2007 the European Court issued a PSD regulation (Payment Service Directive) to make online transfers more rigorous, and statutory. Last year they created the PSD2 directive which introduces new requirements for the latest technology used in payments. If we want to become a conscious user of online payments we must constantly educate ourselves. The future of payments is here, today, so we need to be aware of certain elements that make online payments safe.

The main purpose of the speech is to share with the audience interesting statistics and cases on how to avoid frauds and dishonest sellers on the internet and ensure safety of your finances.