

**3rd Fire Engineering &
Disaster Management
Prerecorded International
Scientific Conference**

**Védelem online cooperated
with the
University of Public Service**

**26th of April, 2023
Budapest, Hungary**



**Book of extended
abstracts**

**Védelem
Tudomány
Budapest
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Welcome speech by Brigadier General Dr. Ferenc Varga

Dear colleagues and friends/Ladies and Gentleman,

My name is Brigadier General Dr. Ferenc Varga PhD. I am the head of the Institute of Disaster Management, Faculty of Law Enforcement University of Public Service. I am the chair of the 3rd Fire Engineering & Disaster Management Pre-recorded International Scientific Conference. I wish that you are well, I am glad to open the Conference here in Budapest, Hungary at the University of Public Service. I am delighted to welcome so many of you.



In the last three years, mainly due to the Covid-19 Pandemic, the organization of online conferences has become increasingly popular. So it is no longer foreign to us to communicate online, so many events, including scientific conferences, have been organized in this way. For this reason, we are organizing our traditional conference this year also in an online pre-recorded format.

The primary goal of the conference is to present the actual researches in the field of Fire Engineering and Disaster Management. Presentations related to fire protection will dominate the conference, but covering the educational portfolio of the University of Public Service, Faculty of Law Enforcement, and Institute of Disaster Management. There will also be lectures in the topic of Safety and Security developed at the scientific level.

I am pleased to inform you, that we have received video presentations by lecturers and researchers from several universities worldwide. I would like to thank everyone to participate in the conference. I wish you all a very fruitful conference!

Thank you for your attention!

A handwritten signature in blue ink, appearing to read 'Dr. Ferenc Varga'.

**Brigadier-General Dr. Ferenc Varga PhD
Chair of the conference**

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- Vass Gyula - University of Public Service, Budapest, Hungary
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Chair of the conference:

Brigadier General Dr. Ferenc Varga, PhD

Co-chairs of the conference:

Gyula Vass, György Heizler, József Ambrusz, Ágoston Restás

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Ferenc Varga (Chair of the conference)

Fire brigadier General, Ferenc Varga PhD, fire protection engineer, assistant professor. Head of the Institute of Disaster Management of Faculty of Law Enforcement, University of Public Service (UPS), Budapest, Hungary. He holds a PhD degree in Military Engineering from the University of Public Service (2019). His research interests are in the field of disaster management and fire protection. Since 1986, he provided various management positions at the Budapest Directorate of Disaster Management. Since 2023, he has been the head of the Institute of Disaster Management (UPS). He has several decades of experience in management, having previously headed the Budapest Disaster Management Directorate. His current research field is military engineering. He is the author of numerous scientific publications.



Gyula Vass (Co-chair of the conference)

Vass Gyula was born in 1957. He has been leading the Institute of Disaster Management since 2017. Colonel Dr. Vass has master's degrees in civil engineer (1991) and fire engineering (1986). He defended his PhD thesis in the field of military sciences, disaster management in 2006 at the Zrínyi Miklós National Defence University. In 2016 he habilitated at Ludovika-UPS and from 2017, he is full-time associate professor. He has positions at Fire and Disaster Management organisations as a firefighter, fire prevention officer, industrial safety expert and different fire chiefs. He is a member of the Scientific Council for Disaster Management, the Technical Scientific Section for Nuclear Accident Prevention and the Nuclear Energy Certification Commission.



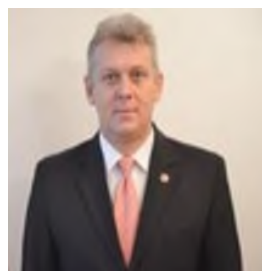
József Ambrusz (Co-chair of the conference)

Ambrusz József (PhD) - COL (Fire Service) József Ambrusz, Assistant Professor of the Institute of Disaster Management, University of Public Service, Acting Head of the Department of Disaster Management Operations. His studies are diverse, in 1993, he graduated from the Lajos Kossuth Military Academy with a degree in border guarding and boarding school pedagogy. In 1997, he obtained a certified degree in human resource management at the Budapest University of Economics. In 2014, he received a certified MSc degree in Defence Administration Manager at the University of Public Service. In 2019, he obtained a PhD degree at the Doctoral School of Military Engineering, University of Public Service with his thesis titled "Elimination of the Consequences of Disasters and the Possible Solutions of the Management, Command and Control of Engineering Tasks of Rehabilitation and Reconstruction".



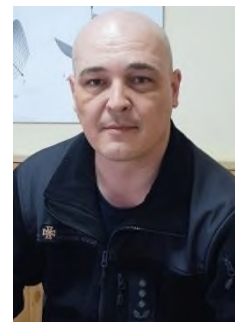
Ágoston Restás (Co-chair of the conference)

Ágoston Restás (Eng., ret. Firefighter Lt. Colonel) habilitated associate professor at the National University of Public Service, Faculty of Law Enforcement, Institute of Disaster Management, head of the Department of Fire Protection and Rescue Operation Management. Restas holds mechanical engineering (1988), economist (1999) and disaster manager (2002) degrees. In 2008 Restás made his PhD thesis at the Miklós Zrínyi National Defense University, titled "Research and development of the aerial reconnaissance and extinguishing of forest fires". In 2013 Restas prepared his other PhD thesis at the Corvinus University of Budapest, titled "Decision-making of firefighting managers in emergencies". Habilitation was also passed in 2015 at the National University of Public Service, Budapest.

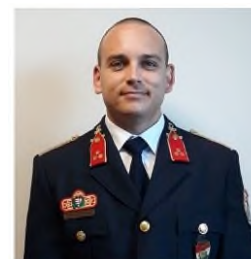


Authors and presenters of the conference

Afanasenko Kostiantyn, born on December 20, 1981. Candidate of Technical Sciences, Associated Professor, Deputy Head of the Department of Fire and Technogenic Safety of Objects and Technologies, Colonel of the Civil Defense Service, National University of Civil Protection of Ukraine, Kharkiv. Born in Kharkiv, Ukraine. Graduated from the Academy of Fire Safety of Ukraine in 2004 and completed a master`s degree. Since 2009, he has been engaged in scientific and pedagogical activities. In 2017, defended his thesis on the specialty 21.06.02 "Fire Safety" and earned a scientific degree of Candidate of Technical Sciences. In 2019 awarded a scientific title of Associate Professor of the Department of Fire and Technogenic Safety of Objects and Technologies at the Faculty of Fire Safety.



Almasi Csaba was born on 23rd of November 1985 in Kecskemét. He has been working as a CBRN Reconnaissance Officer dealing with administration system of hazardous materials. He has experience in intervening and investigating needed to be accomplished at accidents occurring in transport or in dangerous establishments and involving dangerous goods and hazardous materials. He also has an experience in authority work supervising of all means of transport carrying dangerous goods. Almási has a BSc degree in agriculture engineering and an MA degree in disaster management. He began his PhD studies at the Doctoral School of Military Engineering at the University of Public Service in 2020, where he is currently an assistant lecturer as well. His research topic is "Investigation Procedure at Road Accidents Involving Dangerous Goods." The expected time for his thesis defence is spring 2024.



Barina Balázs József was born on November 3, 1983, I live in the city of Tolna. My parents are both kayak - canoe coaches and teachers. Following their example, I also started kayaking, which filled my daily life for more than twenty years. I won medals at world and european competitions, I closed my sport`s career as an national team athlete. I have been working as a firefighter since 2010 in the at the time one and only nuclear power plant in Hungary. During my service, I completed mandatory power plant courses and apart of them I acquired the Bsc degree in Fire Protection and Rescue Management at the National Civil Service University and I completed the University's Master's Degree in Disaster Management. Thanks to my studies, I have been in the position of officer for the third year. As unit leader, I consider the effective protection of the lives and health of the first responders to be my primary



objective. I am currently a first year doctoral student at the Doctoral School of Military Engineering at the University of Public Service.

Benda István, has been a professional firefighter for more than 15 years, currently I am a driver at the Budapest Fire Brigade, in the XI District Professional Fire Brigade.

Berger Ádám is an engineer at the Department of Water and Environmental Security of the University of Public Service. In the course of his work, he examines the spread of dangerous substances in water and in soil. Nowadays he is a doctoral student at the Doctoral School of Military Engineering of University of Public Services. His field of research is Disaster Management. The topic of his research is about the resistance developed by dangerous materials to remediation boards and large artefacts against the irreversible effects of accidents.



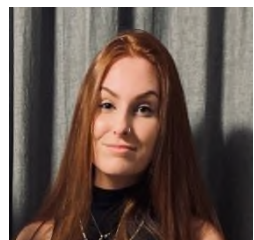
Bodnár László was born on 31 of January 1992 in Budapest. He began his studies in 2010 at the University of Public Service and obtained the BSc degree in defence administration as a Defence Administration Organizer and in 2016 the MSc degree in defence administration as a Defence Administration Manager. He began his PhD studies in 2016 at the Doctoral School of Military Engineering at the University of Public Service and defended his thesis in 2021. He is currently an assistant lecturer at the National Directorate General for Disaster Management, who works at the Institute of Disaster Management of the Faculty of Law Enforcement at the University of Public Service. His research topics are wildfires, firefighting and fires at Wildland-urban interface.



Bodur Enes Muhammed is also research assistant at the Cologne University of Applied Sciences. He has a bachelor's degree in Rescue Engineering. He works in the field of critical infrastructures and focuses on the resilience of health care facilities. He has gained work experience as volunteer firefighter in Cologne.



Bognár Eszter is 20 years old, studying at the University of Public Service majoring at disaster management. Presently she is in her second year specializing Fire Prevention and Rescue Control. She will get her university degree in 2024. She is particularly interested in rescue and fire protection, in the future she would like to conduct research in this topic.



Bolgár Judit dr. CSc. ret.colonel, professor emerita University of Public Service (NUPS) Faculty of Military Sciences and Officer Training (primary email: bolgar.judit@uni-nke.hu) HDI consultant, and KMDI instructor. Qualifications: mechanical engineer (BME) engineer teacher (BME), psychologist (ELTE) clinical academic specialisation psychologist (HIETE). She takes part in the military and policy science high education since 1990. Her researchers' activity is connected to the applied psychology. Her more important research area: Special (danger) psychology; the psychological effects of danger situations; stress effects and PTSD; leadership and organization psychology (primarily psychic suitability, competence, resilience and organizational culture).



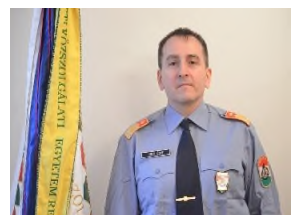
Cimer Zsolt is a chemical engineer, engineer-economist, fire protection engineer and associate professor. He is the vice dean of the Faculty of Water Science at the University of Public Service in Hungary. His research specialization is defence design, industrial safety, explosion protection and risk analysis.



Dobo Anett firefighter lieutenant was born on 14 of August 1990 in Vác. She began her studies in 2009 at the Miklós Zrínyi National Defence University obtained the BSc degree in defence administration as a Defence Administration Organizer and in 2014 at the University of Public Service the MSc degree in defence administration as a Defence Administration Manager, disaster specialization. She began her PhD studies in 2014 at the Doctoral School of Military Engineering at the University of Public Service. Now she is working at the The Pest County Directorate of Disaster Recovery Vác Sub-office. She is also a PhD Candidate. Her research topic is Health and Safety and the raising of the efficiency of the fire organisations at the incidents.



Dobor József is an associate professor at the University of Public Service, Institute of Disaster Management, Department of Industrial Safety. Education: 2006 Eötvös Loránd University, Faculty of Science, MA in Chemistry; 2011 Eötvös Loránd University, Doctoral School of Environmental Sciences, Environmental Chemistry, PhD; 2018 University of Public Service, Diploma in Disaster Management, MA. Degrees: 2012, PhD, Eötvös Loránd University, Faculty of Science; 2018, habil. doc., University of Public Service. Assistant lecturer (2012-2013), senior lecturer (2013-2018), associate professor (2018-). Research areas: chemistry, chemical-biological-radiological damage detection, radiation protection, detection of industrial damage events, industrial safety. Address: Hungary, 1101 Budapest, Hungária krt. 9-11. Nationality: Hungarian, Email: dobor.jozsef@uni-nke.hu



Edelmann Dóra

affiliation: Óbudai University - Doctoral School on Safety and Security Sciences

research area: mass movements, crowd motion models, mass safety

education:

Fire Protection Engineer, Budapest University of Technology and Economics

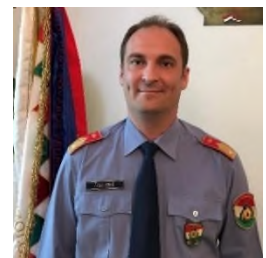
MsC Civil Engineer, Budapest University of Technology and Economics

occupation: engineering and technical consulting, interior design

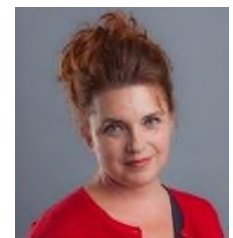
community engagement: volunteer, Hungarian Red Cross



Érces Gergő is an architect, fire protection engineer, University of Public Service, Faculty of Law Enforcement, Institute of Disaster Management, Department of Fire Protection and Rescue Operations Management, associate professor. After obtaining an MSc degree in architecture from the Budapest University of Technology and Economics in 2009, he received a fire protection engineering certificate in 2011 at the Ybl Miklós Faculty of Architecture of Szent István University. In the field of technical sciences, he obtained a PhD academic degree in 2019 at the Doctoral School of Military Engineering at the University of Public Service. His career started as a professional firefighter at the Budapest Fire Department in 2010, where he worked in the field of fire investigation and from 2012 he worked at the Capital Disaster Management Directorate in the field of fire prevention. Since 2017 he has been a lecturer in fire prevention courses at the Department of Fire Protection and Rescue Operations Management of the Institute of Disaster Management of the Faculty of Law Enforcement at the University of Public Service. At the university, he works as a research engineer in the field of disaster management and fire prevention. In 2022 he became the head of the Department of Fire Engineering.



Farkas Johanna is an emergency psychologist, hypnotherapist with 20 years of work experience. I have a part-time job and a full-time job. My part-time job is related to education. I work as an Associate Professor for the University of Public Service at the Faculty of Law Enforcement at the Department of Criminal Psychology, I mainly train police officers. My full-time job is in the biggest Hungarian Children Hospital (called Heim Pál Pediatric Hospital), where I am the Head of the Department of Forensic Psychiatry. Our department is designed for the treatment of outpatients (e.g. youth psychopathy, deviant behaviour, etc.) and inpatients (e.g. suicide, psychosis, self-defeating behaviour) associated (or not) with antisocial behaviour. Our hospital is the only one in Hungary that treats patients (children and youth) with mental disorders and they are sometimes juvenile offenders (therefore, we often meet with police officers. My main areas of interest are criminal psychology and mental disorders.



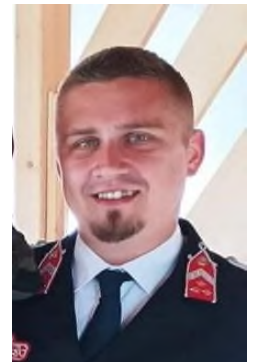
Farkas László was born on 21 December 1977 in Budapest. After elementary school, he graduated from Csanádi Árpád High School in Budapest in 1996. From 1996 to 2002, he attended the University of Physical Education and graduated there as a physical education teacher and trainer. From 2002 to 2010, he worked for several associations as a specialist coach. Since 2010, he has been working at the Budapest Disaster Management Directorate as a firefighter, first as a subordinate, and since 2012 as a platoon commander. He is currently a student at the Faculty of Law Enforcement of the University of Public Service at the Institute of Disaster Management, specializing in the fire protection and rescue operations management.



Fekete Alexander is Professor of Risk and Crisis Management at the Cologne University of Applied Sciences. He works in the field of security research on natural hazards such as floods, earthquakes, or landslides. His research focuses on their impact on affected persons, but also on power and supply chain failures. He has gained work experience at universities, the United Nations and the Federal Office of Civil Protection and Disaster Assistance.

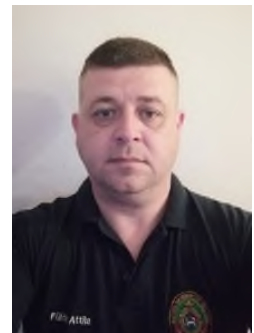


Fodor Máté was born on 13 December 1990 in Salgótarján. He joined the Salgótarján Fire Brigade in 2013 as a firefighter. He started his studies at the University of Public Service in 2020, BA in Disaster Management, specializing in Fire Protection and Rescue Operations Management. Currently, he is the Operations Control Officer of the Nógrád County Operations Management. His main topic is the situation of the first-aid skills of firefighters in the operational area and the possibilities of its improvement. Orcid: 0009-0008-9404-9441.



Fülöp István Attila staff sergeant, E-mail: fulopameister@gmail.com

My name is Attila Fülöp, I was appointed to the Metropolitan Fire Department in 2004 in to the XIII. district fire department. I started my studies at the primary school for fire fighters of the BM KOK. In 2013, I was admitted to the BM KOK service command school. I am currently studying fire protection and rescue management at the University of Public Service.



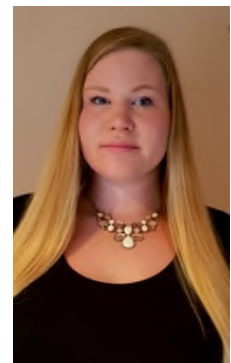
Geiger Manuel is Research Assistant at the Cologne University of Applied Sciences and a medical student at the University of Bonn. He has a master's degree in safety engineering and is specialized on critical infrastructures, especially health care facilities and drinking water supply. He has gained work experience in fire engineering and international experiences as volunteer at the German Federal Agency for Technical Relief (THW) in the INSARAG Heavy Urban Search and Rescue Team.



Gromek Pawel Maj., DSc Eng. serves as associate professor at the Institute of Internal Security at The Main School of Fire Service in Warsaw (Poland) (SGSP) and officer of the State Fire Service of the Republic of Poland. He was Deputy-Dean of Faculty of Civil Safety Engineering at SGSP (2016-2019) and Deputy-Rector for Science and Education at SGSP (2019-2020). He holds an M.S. in Fire Safety Engineering (Engineering Studies) from the Main School of Fire Service in Warsaw, Poland, a PhD in Security Studies (Social Sciences) from the National Defense Academy in Warsaw, Poland, and a Doctorate of Science in Security Studies (Social Sciences) from The War Art Academy in Warsaw, Poland. He completed post-graduate studies in occupational safety and health at Warsaw University of Technology, Warsaw, Poland, and post-graduate studies in pedagogics for teachers at Warsaw University of Life Sciences, Warsaw, Poland. Maj. Gromek is expert in European Research Executive Agency and the Government Centre for Security (Poland). He has researched and published in several areas of security including disaster risk reduction, crisis management, homeland security and infrastructure resilience. He is married and has three great daughters.



Gyöngyössy Éva was born on 13 May 1992 in Budapest, Hungary. Her higher education began in 2010 at Szent István University, Ybl Miklós Faculty of Architecture and Civil Engineering, where she got her Bsc degree as Civil Engineer, in Fire Protection and Disaster Prevention specialisation. She has started her research in connection with electric cables in her Bsc thesis. During her studies, she completed the volunteer firefighter course, and she was member of a voluntary disaster prevention organization. She continued her studies at Szent István University in 2017, and she obtained the Msc degree as Construction Engineer, in Fire Protection specialisation. Her Msc thesis subject was in connection with design of fire alarm system in potentially explosive atmospheres. In 2019, she has started to work at Schrack Seconet Kft., as Junior designer of Fire Alarm Systems, where she has earned experience of large national projects. She decided to continue her studies in aim to expand her knowledge in 2022, at National University of Public Service, Hungary, at Doctoral School of Military Engineering. As continue her Bsc research, her research topic is fire protection of electric cables. The expected time of finish of her PhD studies in 2026.



Gyürü Karina was born on 22 of October 1997 in Csorna. She is a firefighter since 2016 in Kapuvár. She started her studies at the University of Public Service, in disaster management as a BA student. She graduated as a Disaster Management Organizer in Disaster Management Operations. Since 2021, she has been a master's student in Disaster Management at the University of Public Service. She currently works in the Fire Prevention Department in Kapuvár's Disaster Management Office. Her



research area is on-site management of protection and cooperation in flood protection.

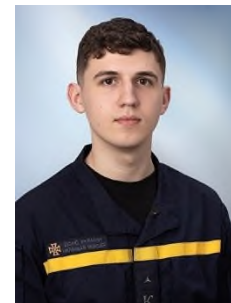
Hábermayer Tamás began his career on August 20, 2002 in the Szentendre Barracks of the Hungarian Armed Forces, after graduating from the Kossuth Lajos Faculty of Military Sciences of the Zrínyi Miklós University of National Defense as an artillery officer and lieutenant. He gained military peacekeeping experience in 2004 when he held a liaison position in the Central - South Multinational Division - Hungarian Logistics Transport Battalion in Iraq. After completing various responsible military positions (trainer, deputy squadron commander), he was transferred from the Hungarian Armed Forces to the Disaster Management staff at his request.



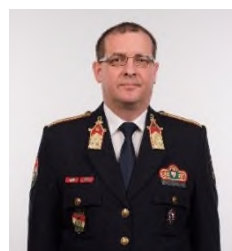
On 1 March 2007, he was appointed to the position of Head of the Civil Protection Branch Office of the Bács-Kiskun County Disaster Management Directorate, which he held until 31 December 2011. During this period, he took part in the protection against the 2010 floods in Felsőzsolca and the red sludge disaster, where he served as rescue and coordination commander.

He developed his professional knowledge by obtaining the master degree of disaster management civil protection organizer, passing a law enforcement professional examination and passing a law enforcement master's examination. In addition, in order to expand his legal knowledge, he graduated from the University of Szeged, Faculty of Law. From 1 January 2012 to 30 June 2013, he held the position of Deputy Commander of the Kalocsa Professional Fire Brigade of the Bács-Kiskun County Disaster Management Directorate. During the 2013 Danube flood, he worked as a defense manager on the Solt - Harta - Dunapataj defense line. From 1 July 2013 to 21 December 2014, he was the Deputy Inspector General of Civil Protection of the National Directorate General for Disaster Management of the Ministry of the Interior. As of December 22, 2014, he is currently the Deputy Director of the Tolna County Disaster Management Directorate. As head, he is responsible for the general replacement of the director and for the professional management of the fire, civil protection, industrial security and integrated official work. He is married, father of two sons.

Harkavyi Andrii, born on April 8, 2003. Studied at the Myrhorod specialized secondary school № 5 with an in-depth study of the English language. In 2020, Andrii graduated from the specialized school and enrolled in a Higher Military Educational Institution, namely the National University of Civil Protection of Ukraine, specializing in "Fire Safety". Currently, at the moment studying in the 3rd year of the "Fire Safety" faculty.



Hesz József is an associate professor at University of Public Service, Institute of Disaster Management, Department of Fire Protection and Rescue Operations Management. He works at the National Directorate General for Disaster Management of the Ministry of the Interior. His research interests are: disaster management, fire protection, firefighting operations management.



Hodálík Marek began his higher education in 2015 at the Technical University in Zvolen at the Department of Fire Protection (BSc. degree topic - forest fires). In 2020 he obtained an MSc. degree in fire safety sciences at the Department of Fire Protection (MSc. degree topic - arson fires). He has begun PhD. Studies in 2020 at the Technical University in Zvolen (PhD. Topic: Application of progressive laboratory method for determination of fire accelerators). His main research topics are changes in fire technical parameters by progressive analytical forensic methods, fire investigation, generation and spread of smoke during fires, fire chemistry. He has certificates and courses: Fire protection technician, civil protection technician, advanced first aid course. He is currently a full-time doctoral student at the Department of Fire Protection.



Holczer Gyula Kristóf

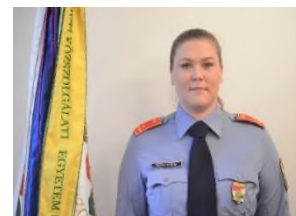
Affiliation: Firefighter – Győr Fire Department

Firefighter since 2018, He started his university studies in 2020 at the University of Public Service, majoring in Fire Protection and Rescue Operations Management.

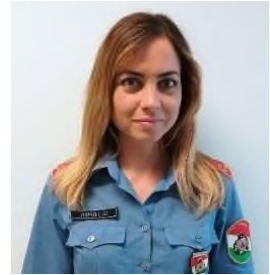
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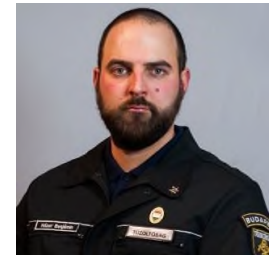
Horváth Hermína is an assistant lecturer at the National Directorate General for Disaster Management, who works at the Institute of Disaster Management of the Faculty of Law Enforcement at the University of Public Service since 2012. She was born on 17 of April 1988 in Szekszárd. She began her studies in 2006 at the Miklós Zrínyi National Defence University obtained the BSc degree in defence administration as a defence administration officer and in 2009 the MSc degree in defence administration as a defence administration manager, disaster specialization. She began her PhD studies in 2013 at the Doctoral School of Military Engineering at the University of Public Service. Her research topic is emergency planning at railway marshalling yards, and dangerous goods transportation. She is also has a certificate of training as safety adviser for the transport of dangerous goods by road, rail and inland waterway. In addition she is the secretary at Scientific Students Association at the Faculty of Law Enforcement at UPS. She received the excellent lecturer title of the Institute in 2017.



Horváth Lilla began her higher education in 2007 at Faculty of Bioengineering at Budapest University Of Technology and Economics. In 2013 she obtained an Msc degree in bioengineering and 2014 in Health and Safety Engineering. She has begun her PhD studies in 2021 at the Doctoral School of Military Engineering at the University of Public Service. She is currently a Health and Safety specialist at the National Directorate General for Disaster Management.



Hózer Benjámín started his career as a volunteer fireman, back in 2013. Served as a volunteer fireman in Pest County and completed the volunteer squad leader course in 2014. Later graduated in a 'Hazardous Industrial Safety Administrator' course and a 'Fire Safety Coordinator' course also. Started the bachelor's degree in 2016 at UPS as disaster manager in industrial safety specialisation. Graduated in 2019 at Ba. and started Ma. course in the same year. Started Doctoral School of Military Engineering in 2021. Part-time lecturer since 2022. Private collector since 2013. Also doing work in fire history research, publication and exhibitions.



Igaz-Danszky Tamás is a 1st year doctoral student at the University of Public Service, Doctoral School of Military Engineering, employee of the Capital Directorate for Disaster Management, Operation Control Service. His research interests focus on the development of operation control service as a part of Disaster Management. He has been working for the Disaster Management for 16 years of which he has spent 12 years in Operation Control Service, until the present. In 2020 he graduate with an Msc degree in "Certified Disaster Manager" at the University of Public Service.



Jambrik Rudolf– Ret. Firefighter Colonel
E-mail: jambrikr@gmail.com
Professional firefighter between 1976 and 2019.
BM TTK (Firefighting and Damage Prevention) - Gyula Juhász
Teacher Training College in Szeged, Pedagogy
Firefighter until 2009 (85-2009 Firefighting Group)2009
Budapest Ferenc Liszt International Airport Fire Department -
Branch Manager



Kalchenko Yaroslav is born on 21.06.1993, a major of the Civil Defense Service, be in the position of senior lecturer of the department, PhD. Was born in Berdyansk, Ukraine. In 2010 graduated from the National University of Civil Defense of Ukraine. In 2020, he obtained the scientific degree of Doctor of Philosophy in the specialty "Fire Safety". The number of articles in the national database – 29. The number of articles in international databases – 16.



Kamau Wanjiku Jane is a senior lecturer in the School of Public Health and Applied Human Sciences, Department of Physical Education, Exercise and Sports Science, Kenyatta University, Kenya. She is the immediate former chairperson of the department and director, Kenyatta University Community Outreach and Extension Programmes. She lectures in the Department of Physical Education, Exercise and Sports Science specializing in human physiology, Exercise physiology, and sports biomechanics. Dr. Kamau is a member of the Kenyatta University Ethical Review Board and The Kenyatta University wellness board. Her area of specialization is Applied Exercise physiology with special research interest in Use of Exercise in Prevention and Management of NCDs.



Ing. dr. jur. **Káтай-Urbán Lajos** PhD (1969): Colonel of fire protection, associate professor, head of Department for Industrial Safety for the Institute of Disaster Management, at the University of Public Service (UPS), Budapest, Hungary. He is responsible for the establishment and development of the industrial safety's higher education system within the institution. He has been working for 14 years in the field of the prevention of industrial and transport accidents at the National Disaster Management Authority in Hungary. He was elected as a deputy chair of the UN ECE Industrial Accident Convention between 2004-2008. He obtained a Ph.D degree in military technical sciences (2005) at Zrínyi Miklós Defence University and habilitation degree (2015) at UPS, Budapest.



Kerekes Zsuzsanna was born 1958 in Budapest. She began her high studies in 1976 at the Pannon University in Veszprém, and obtained the MSc degree in chemical engineering, silicate chemistry specialization. She began her dr.univ studies in 1981 at the Doctoral School of Budapest University of Technology Faculty of Chemical Technology and Biotechnology. She has been an university lecturer since 1999-2020 at Ybl Miklós Faculty of Architecture and Civil Engineering Fire-safety Engineering Óbuda University as fire protection laboratory leader. She obtained a PhD degree in 2015 and habil degree in 2019. Instructor since 2019 at the University of Public Service. She has been working in her profession for 40 years in various fields: material structure research,



ceramics, glass, analytics. Her research topic is "research and development combustion mechanism of non-combustible and combustible materials.

Kersák József Zsolt was born on April 21, 1976 in Pincehely. He has been working as a professional firefighter since 2000, his current position as deputy commander. He studied in Keszthely in 2011 as an agricultural engineer for economic and rural development. He started as a disaster management organizer at the University of Public Service in 2013, graduating in 2019 as a disaster management manager (MSc). From 2019 he is a PhD student at the University of Public Service Doctoral School of Military Engineering. His research topic is „The task of the German civil defense is to analyze its equipment system and technical capabilities, and to examine its adaptation possibilities”. His other research area "Technical development of rescue fire protection". The expected time for his thesis defence is spring 2023.



Kirovne Rácz Réka Magdolna is a lecturer at University of Public Service, Institute of Disaster Management, Department of Disaster Management Operations.

Her studies: Miklós Zrínyi National Defence University, defense administrative manager (2008), Doctoral School of Military Science (2015).

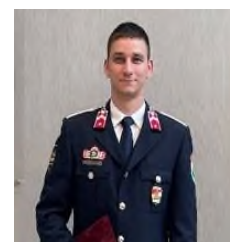
Her research areas: extreme weather events, climate change, disaster management tasks of the local governments.



Kiss Noémi Noémi Kiss is a second year Master's student in Disaster Management at the University of Public Service; University of Public Service; Institute of Disaster Management.



Kovács Máté was born on 16.10.1994 in Kaposvár. I continued my high school studies at the Munkácsy Mihály High School in Kaposvár, where I met the leader of the "KÖTÉL" Association during an interview in 2009. After the interview, I joined the association, where I had the opportunity to learn about both firefighting and water rescue. I obtained my first diving qualification through the association in 2009 and since then I have been actively involved in the search for missing persons in distress in the water. I was a founding member of the Somogy Rescue Group, established in 2011, and of the HUSZÁR rescue organisation, established in 2012. During my volunteer years, I have participated in dozens of water rescue incidents, including missing person search, flood rescue, object search. After moving to Budapest in 2017, in 2019, I had the opportunity to join the diving service of the Budapest Fire and Rescue Directorate as a firefighter diver, where I am currently a driver (diver). In the meantime, I have obtained additional diving qualifications. My highest current qualifications are advanced rescue diver, nitrox



diver and I am in the process of obtaining the dive master (dive leader) qualification.

Kozma András was born on 4 of June 2002. He is studying at the University of Public Service, Faculty of Law Enforcement, Institute of Disaster Management. Presently he is in his second year specializing for Industrial Safety. He will get his university degree in 2024. He wants to continue his studies at the university in the future. His research is about the Flood of Szombathely and the amphibious vehicles.



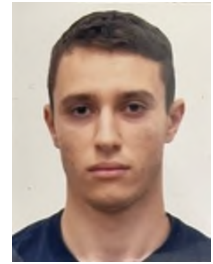
Muchiri Bilha W. is a civil servant working with Murang'a County Government as the Chief Fire and Disaster Management officer. She is trained on firefighting, fire prevention, leadership management in the fire service, training and supervisory management. She heads the Fire Services and Disaster Management Unit in the County. M/s Bilha is currently the treasurer for the Chief fire Officers Association of Kenya (CFOA-K) and a board member for Kenya Road Cross, Murang'a. Since fire investigation is domiciled in her office, she has a special interest in firefighting and investigation with special focus on evidence protection and collection.



Muhoray Árpád PhD is a retired major general of civil protection, honorary university professor of University of Public Service. He graduated in the Military Academy of Armoured Troops Malinovskij Rogyion Jakovlevics in former Soviet Union, in Moscow, his university degree is tank engineer. He served 25 years for the Hungarian Army, he was the commander garrison of town Zalaegerszeg. After the Army Mr. Muhoray joined the Hungarian Civil Protection, he was appointed to the county director of HDM in county Zala in 2000. Between 2002 and 2010 he was the Deputy Director General for Emergency Management of NDGDM, and commander of Operational Staff of Governmental Coordination Committee. Between 2010 and 2011 he was the director of Disaster Management Training Centre of NDGDM and in 2012- an assistant university professor of UPS in Institute of Disaster Management. Since 2020 honorary university professor. Mr. Muhoray obtained his PhD degree at the National Defence University in Budapest. He made several researches in the Hungarian Disaster Management on country and county level.



Németh Krisztián is 23 years old daytime and a graduating student at the University of Public Services. He was born in the County of Borsod-Abaúj-Zemplén, in the city of Ózd. He graduated in Széchenyi István Katolikus Közgazdasági Szakközép Iskola, which is a high school of economics. In this school he had language education in two languages (english and german). He got to know the basics of the operation of the economy and the obtainable financial administrator and project management subspecialty qualifications. Although he acquired complex disaster prevention knowledge during the university, he mainly became interested in the firefighter's job, tools and their responsibilities. His current goal is to get his drone license and he wants to do the master's degree at the same university.



Neuner Steffen is Research Assistant at the Cologne University of Applied Sciences. He has a bachelor's degree in Rescue Engineering. He works in the field of critical infrastructures. He focuses on the resilience of health care facilities. He has gained work experience at the German Federal Agency for Technical Relief (THW).



Nothartné Viszked Georgina was born on 2th of August in Szombathely. She is a firefighter lieutenant since 2019. She started her studies at the University of Public Service, in disaster management as a BA student. She graduated as a Disaster Management Organizer in Disaster Management Operations in 2019, then in 2022 she graduated as a Disaster Management Leader in Disaster Management at the University of Public Service. She works in the Fire Station in Esztergom as a disaster management officer. Her research area is force majeure events in disaster management and disaster preparedness.



Lőrincz Levente Zoltán was born in 2000 in Tolna County. He is currently a second-year student at the University of Public Service, specializing in industrial safety. He decided on his own to work in the field of disaster management, there was no example in his family before that someone chose the life in uniform. As soon as he got here and started his studies, he wanted to apply as soon as possible to a local volunteer fire brigade, because that's what he is really interested in and that is what really made him choose it. He really enjoys spending his time with the fire brigade and working with them on different incidents. It gives him a lot of inspiration for his plans.



Lypovyi Volodymyr, born on December 26, 1978, Candidate of Technical Sciences, Associated Professor, Associated Professor of the Department National University of Civil Protection of Ukraine, Kharkiv. Born in Kharkiv, Ukraine. Graduated from the Academy of Fire Safety in Ukraine in 2002 and completed a master's degree in management at the National University of Civil Defense of Ukraine in 2011. In 2016, defended a dissertation in the field of "Environmental Safety" and earned a scientific degree of Candidate of Technical Sciences. Completed an internship at the Technological School in Kotowice, Poland, and was awarded the title of Associate Professor in the Department of Fire and Technogenic Safety of Objects and Technologies at the Faculty of Fire Safety. Has 2 utility model patents, 41 publications, including 38 scientific and 3 educational-methodical works, including scientific papers published in national and international peer-reviewed professional journals. Also has 6 publications in journals included in the Scopus bibliographic database. Teaches the course "Fire Safety of Technological Processes" for higher education students.



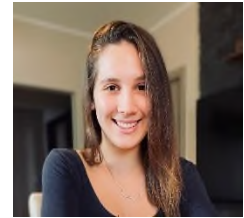
Oliinik Volodymyr Viktorovich, born on September 28, 1973, a colonel of the civil defense service, is the head of the department of fire and technogenic safety of facilities and technologies National university of Civil Defence of Ukraine, Kharkiv, candidate of technical sciences, associate professor. Born in Dniprodzerzhinsk, Dnipropetrovsk region, Ukraine. Since 1997, he has been engaged in scientific and pedagogical activities at the National University of Civil Defense of Ukraine. In 2000, after completing the adjunct position, he defended his thesis for the degree of Candidate of Technical Sciences in the specialty "Fire Safety". In 2005, he received the academic title of associate professor of the department of fire prevention of production technological processes. He is the author of more than 120 scientific publications.



Pántya Péter began his studies in 2003 at the Tessedik Sámuel College (BSc degree in human affairs) later continue at the Miklós Zrínyi National Defence University (MSc an BSc) for Defence Administration Organizer (Disaster Management, Fire Protection and Firefighter) He began his PhD studies in 2008 at the Doctoral School of Military Engineering at the Miklós Zrínyi National Defence University. He is currently an associate professor at the Institute for Disaster Management of the Faculty of Law Enforcement at the University of Public Service. He also has a habilitation. His research topics are: fire and disaster management activities, technical equipment, and the raising of the efficiency of the fire organisations at the incidents.



Papp Réka is 21 years old, studying at the University of Public Service majoring at disaster management. Presently she is in her second year specializing Industrial Safety. She will graduate from college in 2024. She will apply for the master's program the same year because she plans to continue her studies there.



Petretci David, is a police major, graduated as a lawyer and started his police career in 2006 as a crime scene investigator. Recently works at the University of Public Service, Budapest, in the Faculty of Law Enforcement, Department of Forensic Science, as an assistant professor.

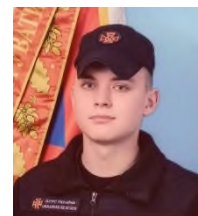
Chair of the Scene of Crime Expert Working Group of ENFSI (European Network of Forensic Science Institutes).



Petrányi Tamás János, graduated from the Budapest University of Technology and Economics with a degree in electrical engineering, and later from the Óbuda University, Keleti Károly Faculty of Business and Management, expert engineering management. In the course of his work, he received an upper-level degree of radiation protection. He is a radiation protection expert in the field of nuclear energy and a full member of the Hungarian Chamber of Engineers as an independent technical expert. He received his PhD degree at the Doctoral School of Military Engineering of the National University of Public Service, Budapest. His research area is ionising radiation measurement. He has an intermediate "C" type language exam in English and German. He started his professional career at the Technical University of Munich in 2002 as a programmer, and after a stay abroad for almost a year, he worked at GAMMA Technical Corporation as a research and development engineer. He has been working for the same company ever since, in different positions. He served in the positions of technical director, head of the nuclear division and eventually director of R&D. In recognition of his professional work, in 2015 he was elected to the management board of the Radiation Protection Section of the Eötvös Loránd Physical Society. He has been a member of the editorial board of the online magazine "RADIATION PROTECTION" ever since. In 2016, he won the Radiation Protection Award for Excellence. He has been elected to be the congress president of the sixth European International Radiation Protection Association (IRPA) Congress in 2022. Since 2023 he is lecturer at the National University of Public Service. He regularly publishes in domestic and foreign professional journals, participates and gives lectures at conferences and congresses. As an industry consultant, he was involved in the creation of several MSc and BSc dissertations, as well as reviewing several dissertations. Thanks to his work, several disaster management and military equipment and devices were created, which are still actively used.



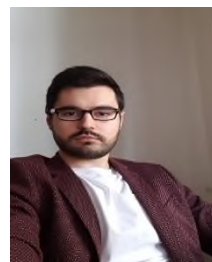
Pikalov Mykhailo is born on 06.05.2004, a private in the Civil Defense Service. I am born in Kharkiv, Ukraine. In 2021, entered into the National University of Civil Defense of Ukraine, where nowadays I have been studying in the second course.



Rácz Sándor was born on 11 of April 1973 in Nyírbátor. He began his studies in 2010 at the University of Public Service and obtained the BSc degree in defence administration as a Defence Administration Organizer and after that the MSc degree in defence administration as a Defence Administration Manager. He began his PhD studies in 2015 at the Doctoral School of Military Engineering at the University of Public Service. He received his scientific degree in 2019. He is currently an assistant professor at the National Directorate General for Disaster Management, who works at the Institute of Disaster Management of the Faculty of Law Enforcement at the University of Public Service. He also worked at the Municipal Fire Department of Budapest and at the Professional Fire Department of Budapest District IX as a Deputy Commander.

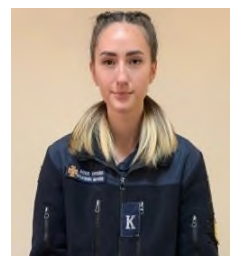


Sibalin Ivan is a lawyer and international relations expert at the Prime Minister's Office. He is a graduated PhD student at the Doctoral School of Military Engineering of University of Public Services. His field of research is Disaster Management. The topic of his research is about the strategic issues of industrial safety activities related to the sustainable operation of energy systems.



Slavhorodska Olesya Serhiyivna, born on September 16, 2003, cadet of the fire safety faculty of the National University of Civil Defence of Ukraine.

She was born in Druzhkivka, Donetsk region, Ukraine. Since 2020, she has been engaged in scientific activities at the department of fire and technogenic safety of objects and technologies. She is the author of 4 scientific publications.



Szarvas Bianka is 21 years old, studying at the University of Public Service, Faculty of Law Enforcement, Institute of Disaster Management. Presently she is in her second year specializing for Industrial Safety. She will get her university degree in 2024. She wants to continue her study at the university in the future.



Szél Norbert was born in 1977 in Kecskemét, Hungary. After high school, I finished at University of Pécs, where I attained a degree as a Physical Education Teacher. Starting from a young age, more precisely since 1994 I have worked as a lifeguard while since 1998 I have worked as a lifeguard coach. And in 2008 I have obtained an international lifeguard coach certificate (ILS). I joined the metropolitan Fire Department in 2008, as a firefighter and diver/underwater firefighter, then I became the



diving leader of the diver section/diving department. I participated in the organization of HUNOR (Hungarian National Organization For Rescue Services) back in 2012, which is a rescue organization. In HUNOR I was responsible for earthquake research-rescue, alongside with being the leader of the flood-lifeguard unit. With the HUNOR rescue organization, I took part in the 2013 Serbian flood rescue, along with the elimination of the 2023 Turkey earthquake.

Teknős László was born on 30 of March 1985 in Debrecen. He is an assistant professor at the Institute of Disaster Management of the Faculty of Law Enforcement of the University of Public Service, fire captain of the professional disaster management organization. Graduated in 2010 as a Certified Defense Administrative Manager, and in 2015 earned a PhD in Military Engineering. In 2021, received a degree in agricultural engineering from Szent István University. With his research on climate change and disaster management, he has participated in several Hungarian projects as a researcher, as has won various positions and awards in several national and professional competitions. He was named 'excellent lecturer' of the Institute of Disaster Management of the National University of Public Service in the academic year of 2017/2018. In 2020, he received the János Korponay Prize from the Hungarian Military Science Society and his short monograph entitled 'Disaster Management Tasks Due to the Effects of Climate Change and Extreme Weather' was awarded the Publication Level Award in the category of natural and technical sciences at the National University of Public Service. On November 26, 2021, 2nd place in the tender announced by the Scientific Council for Disaster Management in 2021 with the project entitled 'Investigation, analysis and assessment of the growing tendencies of natural disasters and events from the perspective of disaster management'. His research interests include disaster management, environmental safety, social aspects of climate change, sustainable development dilemmas, current issues of European Union environmental policy, analysis and evaluation of the probabilities of natural disasters, their damaging effects, flood protection, theory and practical logic system of catastrophe science.



Tlou Raphaela PhD, Lecturer (The University of the Free State, Bloemfontein, South Africa). Research interest: I am a socio-environmental scientist, with an interest in how the social issues interface with the environment holistically. I developed an interest in human-wildlife conflict because I believe human and animals can live together in harmony. Since joining the UFS, and teaching the mental Disaster Mental Health ; Public and mental health modules, I developed a strong interest in the Psychosocial impacts of disasters and will be focusing my research and creating a niche around that. Education: I hold a PhD in Conservation Ecology Specialising in Zoology from the University of the Witwatersrand, my Msc is in social Sciences specialising in Disaster Management from the University of the Free State. My undergraduate Bsc degree (obtained with 10 distinctions) with majors in Zoology and Botany is from the University of South Africa. My PhD research focused on the impact of crop

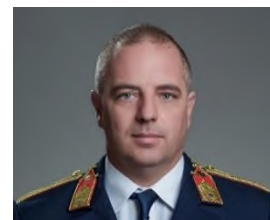


raiding on subsistence farming community adjacent protected area in the rural South African community. My areas of interest include conservation biology, biodiversity, I am more of an Animal, Plant and Environmental Sciences person, leaning more to animals (human and non-humans). I am also interested in Risk Reduction, impact studies to understand socio-environmental problems and Biological invasion.

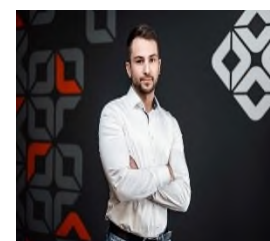
Tomka Peter joined the Budapest Fire Department in 2010 and is currently serving as a squad commander at the 10th District Fire Department. He holds Master's degrees in Disaster Management and Disaster Protection Engineering and is currently pursuing his doctorate at the University of Public Service, where he is researching the efficiency and safety of interior firefighting. He has won the Balogh Imre Memorial Competition in 2015 and was awarded the Medal of Valor in 2019.



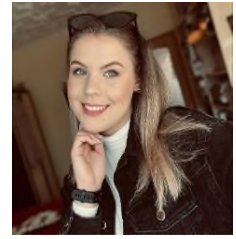
Tóth Balázs was born on February 12, 1978 in Pápa. He started his professional service as a soldier and has been a firefighter since 2004. In 2019, he graduated from the National Public Service University with a degree in Fire Protection and Rescue Management as a BA student. Since 2021, he has been a student of the Master's program in Disaster Management at the National University of Public Service. He served as an intervention firefighter in the Győr Professional Fire Command. He is currently serving at the County Disaster Management Directorate of Győr-Moson-Sopron, his position is KML commander. His research area is rescue and fire protection, including the effect of protective equipment on the workload of firefighters.



Vásárhelyi Örs is a first-year Ph.D. student in the Doctoral School of Military Engineering faculty of the University of Public Service. He works as an IT Security Consultant at Alverad Technology Focus Kft. Örs Vásárhelyi was born and lives in Budapest. He completed his high school graduation at Vörösmarty Mihály grammar school. Then he was admitted to the University of Public Service, specializing in Disaster Management Industrial Safety. In 2017 he participated in the XXXIII OTDK competition where his work received an award. He obtained his Bachelor of Arts degree from the university. Following his graduation, he continued his studies at the University of Public Service. However, due to Covid-19, he had to interrupt his education. In the meanwhile, in 2021, he graduated from Mymove Fitness School and has become a sport instructor in bodybuilding and fitness. In 2022, he is obtained a master's degree in Disaster Management. Also in this year, he got his ISO/IEC: 27001:2013 Lead Auditor certificate.



Végső Alexandra is 20 years old, studying at the University of Public Service majoring at disaster management. Currently she is in her third year specializing in Industrial Safety. She will get her university degree in 2023. At the same year she will apply for Master's degree, because she wants to continue her studies there in the future.



Waiganjo Luka (PhD) is a Lecturer in the Department of Physical Education, exercise and Sport Science. He has a Bachelor of Education (Second Class Honors Upper Division) in Physical and Health Education from Kenyatta University. He also did graduate studies at the same university and obtained Master of Science, Physical and Health Education as well as Doctorate in Physical Education. He has also published with African Journal for Physical, Health Education, Recreation and Dance (AJPHERD), Kenya Association for Health, Physical Education, Recreation, Sports and Dance (KAHPER-SD) and Asian Journal of Applied Sciences as well as International Journal of Environmental Research and Public Health. His research interests are in Sports & Exercise Ergonomics, Occupational Ergonomics and Outdoor & Experiential Training.



Zimin Serhii, born on January 27, 1997, Senior Lieutenant of the Civil Defense Service, researcher in the Department of Organization of Scientific Research and Patent Activities of the Scientific Research Center, National University of Civil Protection of Ukraine, Kharkiv. Born in Verkhovtsevo, Ukraine. In 2019, he graduated from the National University of Civil Defense of Ukraine. Since 2020, has been studying for a Ph.D. degree in specialty 261 "Fire Safety" in the postgraduate course of National University of Civil Defense of Ukraine.

