NATIONAL UNIVERSITY OF PUBLIC SERVICE
Doctoral School of Military Sciences

Gábor Mészáros:

Excess speed as a cause of fatal road accidents

Theses of PhD Dissertation

Supervisor:

Dr. Róbert Major pol. colonel

Budapest

2018

1. The research problem

The data in the *Statistical Yearbook of Road Accidents*, published by the Hungarian Central Statistical Office (hereinafter: CSO) constitute a major basis of investigation and research into the safety of road traffic.

The police provide the CSO with the data on a road accident at the beginning of the proceedings and not when it has ended. Thus, the statistical data sheet can only be prepared relying on the data in the record drawn by the police officer taking measures at the scene of the accident.

The CSO also publishes the data concerning the causes of accidents, one of which is excess speed. It is a high priority violation of the rules, which is difficult to establish precisely at the scene of the accident. In most cases it can be done by a forensic engineering expert, who will not give an expert opinion at the scene. This evidence could justify the change in certain data established before, but it usually does not arrive in a short time, not even before the 30-day deadline, after which the collection of data must be closed, although speed is a major cause of deaths resulting from an accident. This is the reason why a lot of research is conducted concerning the impact of modifying the general speed limits.

Thus, one of the most important statistical data reported by the police, the one concerning speed does not correspond to the facts established during the investigation of the accident. This is due to the methodology of reporting. It could only be improved if the expert's opinion were at the disposal of the reporting authority, that is the police by the time they must submit the data.

In Hungary, speed checks done by the police while monitoring road traffic is an activity that most concerns those involved in it and it is also the activity that is most rejected by the public. It attracts a lot of criticism both concerning the speed checks themselves and the applied methodology. The *Statistical Yearbook of Traffic Accidents*, published by the CSO is the main basis for such criticism, because according to it excess speed accounts only for 1% of the causes of accidents.

In Hungary there is no database and (apart from the present one) no research is

being conducted to show whether there is a discrepancy between the statistical data concerning the cause of accidents provided by the police for the CSO and the causes of accidents established after the investigation of the accidents. Lacking such data it is difficult to give the public and those involved in traffic a scientific justification supported by data as to why speeding is dangerous and what role excess speed plays in road accidents, how it affects the seriousness of their outcome.

Based on the data gained from investigations of fatal road accidents carried out by the police, the aim of my dissertation is to examine whether excess speed has a role in such accidents.

2. Hypotheses for research

The subject of my research is fatal road accidents, cases when the authorities asked the appointed engineering expert to make a statement concerning the mechanism of the accident, too. The most important aim of my research is to establish whether a discrepancy can be found between the data provided after the official investigation of the accidents and the statistical data of the CSO concerning cases of excess speed and the causes of accidents. According to my hypothesis there is such a discrepancy, especially if we do not only examine excess speed as a cause of accidents but also analyse its role in the accidents resulting in death.

An important requirement in the research into the causes of accidents is that the data of the accident must be comparable in terms of space and time. For this, a crucial condition is that the interpretation of the data of the accidents and the usage of codes for the various accidents should be uniform within the police forwarding these data to the CSO. When meeting and talking to the leaders and staff of police units involved in investigating road accidents, I frequently hear about the various practices concerning the measures taken during the investigation at the scene of the accident and the application of the statistical codes for accidents. Making an opinion governed by nonconformity and interpretation independent of regulations are grave mistakes in such procedures. [1] By this research I wish to prove that CSO codes for the causes of accidents are not interpreted in the same way by the various county

[1] VÁRY, László: *A szubjektivitás veszélyei a közlekedési balesetek megítélésében.* In: Belügyi Szemle, Budapest, 1/2004, pp. 109-113

police headquarters and the application of these codes is not unified or consistent.

Whether it is due to subjective or objective reasons, unfortunately the activities of the police are not free of errors, either.[2] Yet, our goal can only be to detect and eliminate them. The errors that have been explored during the research and are important from the aspect of the research are discussed in the dissertation.

To establish the fact of excess speed it is essential that during the investigation at the scene of the accident the speed limits for the given road and for the vehicles involved in the accident are established. In my work I regularly see that, despite the fact that according to the section on the *data and features to be recorded at the scenes of accidents* in the National Police Commissioner's order ***No. 60/2010. (OT 34.) ORFK on the rules of the police procedure concerning traffic accidents and traffic offences,*** in the *"report on the investigation" "i) the speed limit(s) for the vehicles"* must be recorded, the police officers often record the speed limit defined for the scene, in other words the speed limit defined for cars, regardless of the types of vehicles involved in the accident. According to my hypothesis, in the reports on the fatal road accidents examined during my research the data concerning the speed limit defined for the location of the accident – if the vehicle is not a car, a motorcycle or a motor vehicle with a maximum authorised mass not exceeding 3500 kg – are often recorded inaccurately.

3. The aims of research

The aim of the research is to provide accurate data for the achievement of strategic road safety objectives and for criminological interventions aiming at reducing the number of traffic accidents. The research findings will prove that cases of excess speed are present among the causes of accidents in a considerably higher ratio than suggested by the figures in the statistical data of the CSO. My research helps the accident prevention activities of the police in that it explains the importance of speed enforcement among traffic control-related tasks, originating in the causes of accidents and justifies the existence of certain checking tactics by revealing the cases of speeding that led to fatal road accidents.

[2] IRK, Ferenc: *A közlekedésbiztonság mint a globális világ része*. In: Belügyi Szemle 10/2011, Budapest, pp. 5-15

By applying the findings of the research, with the help of objective data, the social acceptance of speed enforcement can be increased.

4. Research methods

Large-scale collection of large amounts of data, the systematic, unified, rule-based measurement and the possibility to quantify the data are important means in the empiric, quantitative research I conducted. These enabled me to answer the questions I specified during the research. In other words, I approached the research on the premise of quantitative research. My research – similarly to quantitative research in general – is deductive in character. I collected information on a large sample so that I would be able to prove my hypotheses and outlined theoretical statements. [3]

The data of the research are quantitative data describing the quantity values of excess speed. Experts often make it clear in their evidence that they cannot make a statement on the travelling speed of the vehicles before the accident, due to the absence of skid marks, therefore they name the impact speed as the proven travelling speed before the accident. This means that in certain cases the travelling speed of the vehicle before the accident might as well have been higher than the impact speed of the vehicle or the speed at which it ran over someone, but, obviously, in the expert's evidence and during the research only proven speeding can be taken into consideration.

"Sampling is a significant element of quantitative research, as we can gain reliable results only by applying a sample that represents (maps) the target population accurately." [4] In view of the fact that by this research I wish to compare the yearly data of the CSO concerning fatal road accidents with the data I collected, and that the CSO publishes the data of all the fatal accidents of the given year, I could not narrow down the basic population, that is the fatal road accidents taking place in Hungary. Thus, in this case a representative sampling was not possible, it was only expedient to examine the whole population, therefore I included the entire population. This was the only method by which I could make sure that the findings of the research describe clearly and reliably the features of the target population, the results of the examination of excess speed cases.

[3] BONCZ Imre: *Kutatásmódszertani alapismeretek.* In: Pécsi Tudományegyetem Egészségtudományi Kar, Pécs 2015, ISBN 978-963-642-826-6
http://www.etk.pte.hu/protected/OktatasiAnyagok/%21Palyazati/sport/Kutatasmodszertan_e.pdf [2017.07.28.]
[4]BONCZ, Imre: *Kutatásmódszertani alapismeretek.* In: Pécsi Tudományegyetem Egészségtudományi Kar, Pécs 2015, ISBN 978-963-642-826-6
http://www.etk.pte.hu/protected/OktatasiAnyagok/%21Palyazati/sport/Kutatasmodszertan_e.pdf [2017.07.28.]

The method of data collection was the analysis of documents. In order to reach the aims of research, it is necessary to analyse the data of road accidents, particularly those of the fatal accidents, as *"the basis of appropriate prevention is the exact analysis of accidents."* [5]

I applied for permission to study the investigation documents of fatal road accidents, necessary for document analysis and was granted this permit by the National Police Headquarters, all the County Police Headquarters and the Budapest Police Headquarters. The data collection phase of the research was started in October 2016 and was finished in August 2017.

I also presented and analysed the source of one of the basic issues of the dissertation, the concept and legal interpretation of excess speed and inappropriate speed.

5. Summary of the investigation and of the research findings

In the first chapter of my dissertation I presented and analysed the responsibilities of the state concerning traffic and road traffic safety. I described the important rules and regulations and examined traffic control conducted by the police as a public task. Among the legislation related to the dissertation I described and analysed the development of legislation related to the different speed limits applied in road traffic and the changes in the tasks of the traffic police. With the help of Hungarian and international special literature I described and analysed the consequences of the changes concerning the speed limits defined by the rules and regulations and the impact of the modification of speed limits on road safety. I examined the impact of the changes in the methodology of traffic control carried out by the police on road traffic safety. I explored the connection between the methodological and quantitative changes introduced in police road checks and road traffic safety. I presented the developments implemented by the police in the area of speed enforcement and the prospective directions of development.

In Chapter 2 I explored the problems of statistical data collection, the process of data collecting done by the CSO and the related problems. I analysed the process of statistical data

[5] IRK, Ferenc: *Közlekedés-biztonság és bűnözéskontroll*. In: KJK-KERSZÖV Jogi és Üzleti Kiadó Kft, Budapest, 2003. p. 31. ISBN 9632247175

collection and highlighted the pivotal points of data collection, namely that, because of the peculiarities of the data collection methodology, the provider of the statistical data, the police forward the data recorded during the investigation of the scene of the accident to the CSO and not the ones established at the end of the proceedings. I examined the system of figures and indicators related to the statistical data of road accidents.

Underpinned by Hungarian and international literature, in Chapter 3 I presented the main connections between the speed of vehicles and road accidents, the related scientific models, the Power model and its more precise version, the exponential model. I examined and analysed international programmes aiming at reducing and enforcing speed in order to increase road safety.

In Chapter 4 I examined and analysed the road safety situation in the European Union and in Hungary in particular. I established that both the European Union and Hungary are lagging behind in achieving the objectives defined in the field of increasing road safety. Hungary seems less and less likely to achieve the objectives set for 2020. Concerning the road safety situation in Hungary, I established that the improving trend stopped in 2013 and went into reverse.

In Chapter 5 I compared the findings of the research into the speed of vehicles involved in fatal road accidents with the data in the 2014 and 2015 CSO statistical yearbooks concerning the causes of road accidents. Based on the data established by the authorities gained through my research, involving the analysis of police and court documents, I complied a table representing the causes of road accidents. The codes for the causes of accidents that I used for the research analysis were created in each case by the police, at the beginning of the procedures, before forwarded to the CSO. My investigation involved comparing these codes with the ones I established, using the same methodology when analysing the documents on the accidents at the end of the procedures and by using the tables published by the CSO labelled as “Causes leading to accidents”, in which they allign these causes with the various types of violations specified by the Highway Code. There is one code for each type of violation in the Highway Code and I used the same codes in my table. Thus, I established the codes based on the statements of the authorities, using a standardised methodical mechanism.

Before analysing and comparing the codes for the causes of accidents, in order to check them, I asked for help from the Statistical Department of the CSO. They gave me the

codes of all the accidents involving personal injury in the two years under discussion, as well as the time and date of the accidents and the codes indicating the seriousness of the accidents. I identified the fatal accidents I investigated by the time and date of their occurrence and I compared the codes for the causes of these accidents obtained from the police for the purposes of the research with the codes in the CSO database. I established that each fatal accident had the same code indicating the cause in the two databases.

Considering the fact that when defining excess speed, the actual excess speed must be specified based on the laws of physics, I, contrary to the principles of criminal procedure, did not take into consideration the smallest provable value of speed, but the most likely (mean) speed value established by the expert's evidence. When establishing the number of excess speed cases, I took into account only those cases in which the lower value of the speed interval given by the expert was higher than the actual speed limit and the most likely value was higher than the accepted margin for speed measuring devices, i.e. 3 km/h.

By providing examples, I presented the process of the examination and document analysis and the content of the documents from the investigation at the scene of the accident to the court ruling.

In each region I presented whether, by the end of the analysis, the original codes for the cause of the accidents, forwarded to the CSO were identical with or different from my findings.

I proved that excess speed was present in much more fatal road accidents than in the data of the CSO in all the seven regions, and not only as the secondary but as the primary cause of the accident.

In Chapter 6 I analysed the data obtained during the research. I pointed out that concerning the 573 fatal accidents of 2014, experts verified excess speed in the case of 191 accidents and 201 vehicles. The figures in 2015 were: 585 fatal accidents, out of which in 205 accidents excess speed was verified, involving 226 vehicles. Thus, I proved that excess speed is present in about 30% of the fatal road accidents.

After summarising the data gained from the research I compiled the tables that show how the codes for accident causes would have been modified if the police had sent them to the CSO only after the proceedings were closed. Relying on the tables with modified codes, I came to the conclusion that if the violence category of the Highway Code, serving as the basis

of the code for the cause of the accident had been identified at the end of the proceedings, the most frequent accident cause would have been non-compliance with the speed limit, in other words excess speed, amounting to 20% of all accidents.

I found that in accidents involving excess speed, in other words, in accidents where the expert established speeding, the number of fatalities per accident was significantly higher. On average there was an 8.4% and an 11.6% increase of fatalities in such accidents in 2014 and 2015 respectively as compared to accidents in which the fact of speeding was not established. This means that accidents involving excess speed are more likely to lead to the death of several people (in one accident) than in those in which excess speeding is not established.

The research revealed that in the case of fatal road accidents, the report often records only the speed limit concerning cars, even if the accident involved other vehicles, too. Therefore I proposed that both in training and during commanders' checks, special emphasis should be placed on the precise data recording concerning the content elements of the reports.

I pointed out that in 2014 65 out of 573, that is 11.3% of fatal road accidents happened on sections of roads with road signs marking the maximum speed limit.

By analysing the data gained during the research, I established that in 2014 in Hungary 6.3% of the fatal road accidents were accidents resulting from excess speed that happened on sections of roads where signs marking the maximum speed limit were in effect.

I revealed that in 2015, 69 out of 585 that is 11.8% of fatal road accidents happened on sections of roads with signs marking the maximum speed limit.

By analysing the data gained during the research, I established that in 2015 in Hungary 6.8% of the fatal road accidents were accidents resulting from excess speed that happened on sections of roads where road signs marking the maximum speed limit were in effect.

I revealed that the cumulative average rate at which all types of vehicles exceeded speed limits was 19.48 km/h in 2014, but in the case of motorcyclists this rate was 27.24 km/h. In 2015, it was also motorcyclists who committed speeding on the largest scale, exceeding the limits by 30 km/h, considering all vehicles and speeding both in urban areas and on the open road. However, considering only urban areas, cars exceeded the speed limit by 32.41 km/h on average.

I established that in the case of fatal road accidents involving speeding it is provable that from 2014 to 2015 the average number of speeding cases increased and the rate of exceeding the speed limit grew, towards the domain of cases in which speeding is “visible” for speed checks (because the rate of speeding is at least 15 km/h more than the speed limit) and the offender, without being stopped, can be penalized by an administrative fine. While in 2014 in the case of fatal road accidents (where excess speed was established by an expert) 59.2% of excess speed cases were “invisible” for speed checks during which vehicles were not stopped, in 2015 this ratio was only 47.8 %.

I examined whether there was a difference in car speeding cases between 2014 and 2015, as I detected the largest difference in the average speeding of car drivers. The results of the independent t-test showed that cars had significantly larger average speeding rates in 2015 than in 2014.

I also examined the main causes and features of the fatal road accidents involving vulnerable road users. I found that 20% of the fatal road accidents of cyclists were “lonesome”, that is they concerned only one bicycle and no other vehicle. Also, 30% of these cyclists were under the influence of alcohol at the time of the accident. I established that the accidents that happened due to infringement of the rules by the cyclist amounted to 61.2% and 65.1% of the fatal cyclists’ accidents in 2014 and 2015 respectively.

I found that in the years examined by the research, pedestrians hit by vehicles at a speed lower than 30 km/h were mainly elderly people. Out of 29 accidents, 21 victims were older than 60. In 5 cases the victims were younger than 60 and the vehicle hitting them (bus or lorry) ran over their bodies. This means that at a low impact speed, when the vehicle does not run over the pedestrian, it is almost exclusively the pedestrians over 60 that die. Younger pedestrians have a good chance to survive such accidents.

I revealed that in the two years examined, out of 99 fatal road accidents involving motorcyclists in 73 cases forensic motor vehicle experts were appointed to investigate the mechanism of the accidents. Out of these 73, in 47 cases (64%) the motorcyclists’ excess speed was proved by the experts. In 48% of all the motorcyclists’ fatal road accidents, speeding committed by motorcyclists was proved. In 22 cases I established not only that there was speeding involved in the accident but also that the cause of the accident was excess speed. That is 22% of the cases. I also revealed that out of 92 cases also involving a

motorcyclist, in 82 the authority established some kind of traffic offence committed by the motorcyclist.

6.New scientific findings

1. I established that considering the fatal road accidents of the two years under discussion, **the ratio of the accidents in which engineering experts verified excess speed**, that is, in which excess speed appeared as the primary or secondary cause of the accident, **was over 30%**.

2. I verified my most important hypothesis concerning both of the two years under discussion, namely that, due to the methodology of statistics recording, the data in the *Statistical Yearbook of Road Accidents* regarding the causes of accidents are significantly different from the data established by the investigation of fatal road accidents with respect to excess speed (exceeding the speed limit) as the cause of the accident. **As compared to the average 3%** published by the CSO, **in reality about 20% of fatal road accidents** were caused by excess speed.

3. I proved that the **appearance of statistical data that conceal the real causes of the accidents** and that may lead to drawing mistaken conclusions is the consequence of the **specific feature of the data collection methodology**.

4. I revealed that the police headquarters of the various counties and regions have **different practices** for categorising the causes of the accidents, which distorts the data concerning the causes of the accidents.

5. I was the first to reveal that very often during the investigation at the scene of the road accident, when establishing the data of the each vehicle, they **do not define the speed limit for the vehicle that was involved in the accident**, especially in the case of motor vehicles and combination of vehicles with a maximum authorised mass exceeding 3500 kg and of bicycles. I established, however, that in such cases during the police procedures, both in the forensic engineering expert evidences and in the decisions and the bills of indictment concluding the police procedure they use the right data concerning the speed limits.

6. I pointed out that in 2014 and 2015, the number of fatalities per accident is significantly higher in accidents in which the forensic engineering experts established

excess speed than in the accidents in which there was no excess speed present. I proved that on average, the number of fatalities is 10% higher in accidents involving excess speed than in accidents with no excess speed.

7. I revealed that the wrong driver behaviour of ignoring road signs indicating speed restrictions and continuing travelling at the speed legal before the road sign is detectable in fatal road accidents, too. 6.5% of all the fatal road accidents took place when there was excess speed present in a road section regulated by a road sign indicating speed restriction, and this amounts to 55% of all the accidents taking place on such road sections.

7. The application potentials of the research findings in theory and practice

Consulting the findings of my research, experts and researchers investigating road safety will be able to see a more nuanced picture about the role of excess speed in fatal road accidents.

With the help of the data revealed by the research, it will be easy to inform those involved in traffic about the impact of excess speed on road safety in a comprehensible way, applying objective data, both in the media and in education.

The research has proved that in the two years under consideration (2014 and 2015) speeding was present in fatal road accidents to a significantly greater extent than it is represented by statistical data. Although the research investigated the two years indicated, it is obvious that the ratios are similar every year. However, it is not enough to rely only on the data gained by this research. Longer-term collection of data is essential for the investigation of the change in the statistical data of processes and road accidents. The police collect the data to be forwarded to the CSO in a developed, well-functioning network. By publishing the statistical yearbook, the CSO closes the collection of the data of accidents for the given year, but **the police as the organisation responsible for data processing should continue collecting the data** by adding the data established by the examinations to the police database. Thus, this database should be supplemented, for example, by the data concerning the speed of the vehicles involved in the accidents, as established in the expert opinion and by the type of the infringement of the Highway Code as established by the police proceedings. Obviously, the database forwarded to the CSO must also be preserved in its original form, so that it can be compared with the supplemented database. In the case of fatal and serious accidents, if a forensic engineering expert has been appointed during the proceedings to establish the speed of the vehicles, when the expert opinion arrives, the data should be forwarded to the department of the National Police Headquarters doing the data collection, where they can also record these new data, too, in the supplemented database. According to the experience I gained by the research, the necessary expert evidences are at the authority's disposal in two years following the accident and a vast majority of the proceedings are finished with a final ruling within three years of the accident. Thus, the modified database could be closed three years following the accident (or in five years at the latest). Due to the system being so developed, the additional data collection and the work invested would be recovered soon, as the police would have an exact database concerning the speed of vehicles at the time of the

accidents, and, based on it, it would be more efficient in accident prevention, speed enforcement and merely police presence. Not least, with the help of these data, the police can give a more precise picture to the public about the role of speeding in road accidents, thus helping the teaching of road safety skills, which, I think is the most important element of road safety. Clearly, this database must be accessible to the public and researchers.

Based on my research findings, it can be proved that excess speed has a major role in accidents, therefore the justification of police checks is unquestionable. It is an important means of accident prevention. Based on the data revealed, the methodology of speed checks should be revised. In order to increase efficiency, we should return to the joint application of covert and visible checks. Apart from speed checks in the scope of strict liability, not involving the stopping of vehicles, speed checks involving the stopping of vehicles should be applied more frequently. Offences "not visible" for those in the scope of strict liability offences must be uncovered. By establishing the identity of the drivers and selecting the ones that pose a threat to road traffic, by increasing the efficiency of the endorsement/penalty points system, road safety can be further improved.

Speed enforcement is essentially a policing task. Conducting speed checks is a key issue in road traffic control. On the one hand, because it is one of the basic rules of traffic rules, compliance with which has not only preventive impact but it also reduces the consequences of the damage. On the other hand, probably due to these reasons, most technical devices at our disposal are suitable for conducting this type of checks. [6] At the same time, we can establish that a decisive majority of fatal road incidents are the result of wrongful conduct and, as experience shows, they cannot be eliminated merely by punishment. The problem must be handled at the place where it occurs. In other words, we must return to the much talked about human factor as the basic factor of the drivers' suitability for road traffic. Punishment usually results in avoidance activity and it concerns only one of the sub-functions of personality. Real change can only be expected if there is a possibility of psychological intervention affecting the whole personality, which, focussing on the person's personality, orientation and attitude, tries to enable those involved in traffic to behave properly.[7]

Based on the data gained from the research, among the target groups of accident prevention we must pay special attention to elderly pedestrians and the reinforcement of rule-

[6] MAJOR, Róbert – MÉSZÁROS, Gábor: *Forgalom-ellenőrzés,* In: Egyetemi jegyzet, NKE Szolgáltató Kft., Bp., 2015.
[7] ARANYOSI, Judit – MAJOR, Róbert: *Kezelő jellegű intézkedések megalkotása a közlekedési bűncselekmények körében*. In: Belügyi Szemle, 4/2005, 52.

abiding behaviour of motorcyclists.

Rule-abiding as a basic attitude to traffic must be acquired in the family, as part of socialisation in public education, according to the a child's development level and, obviously, at the drivers' training. An environment accepted and respected by those involved in it, making traffic safe and fast would help to shape, enforce and maintain this type of attitude. The work of the police in traffic control and speed measurement can be really efficient and accepted if these conditions exist. My research proved that this rule-abiding behaviour is absent in most cases, for example when drivers select the speed for their vehicle on the road. Therefore, campaigns and events related to road safety should define the reinforcement of rule-abiding, responsible behaviour in traffic as their main objective. Without public acceptance, merely by police measures it is impossible to succeed in reducing the number of cases involving excess speed, which is one of the major factors influencing road safety.

Publications

In English

1. Róbert Major – Gábor Mészáros: *Traffic Safety in Hungary* In: doc Ing Pavol Augustín CSc, JUDr Bohus Chochlík (szerk.) Prevenciaako nástroj na znízenie dopravnej nehodovsti. 190 p. Bratislava: Akadémia Policajného zboru Bratislave, 2015. pp. 161-168. (ISBN:9788080546397)
2. Róbert Major – Gábor Mészáros: *The Current Questions of Police Speed Control*. MAGYAR RENDÉSZET 2016/2.: pp. 131-138. (2016)
3. *Correlation of Exceeding of Speed Limits and Traffic Accidents in Hungary* MAGYAR RENDÉSZET 2018/2. (2018)

In Hungarian

1. *A közúti közlekedés igazgatása*.(**Directory of Public Road Traffic**) (Társszerző: Kutsera Péter) Rendészeti szakközépiskolai jegyzet, 2006
2. *A rendészeti szakközépiskolába járó tanulók pályamotivációjának vizsgálata*. (**Longitudinal Examination of Career Motivation of Students in Police Technical School**) MAGYAR RENDÉSZET 2010 3-4 szám
3. *A karos forgalomirányítás gyakorlati tapasztalatai.(* **Experiences related to arm signal controlled police traffic direction**) BELÜGYI SZEMLE: A BELÜGYMINISZTÉRIUM SZAKMAI TUDOMÁNYOS FOLYÓIRATA (2010-) 62 : 11 pp. 69-82. , 14 p. (2014)
4. Major Róbert - Mészáros Gábor, Major Róbert (szerk.): *Forgalom-ellenőrzés*. (**Traffic Control**) Budapest: NKE Szolgáltató Kft., 2015. 199 p. (ISBN:978-615-5527-18-0)
5. *A közúti közlekedés energiafelhasználásának biztonsági kérdései*. (**Questions of safety of energy consumption in the terms of road traffic)** HADTUDOMÁNYI SZEMLE VIII. évfolyam:(4.szám) pp. 291-305. (2015)
6. *A korrupció megítélése a rendészeti pályára készülő hallgatók körében*. (**Attitudes Towards Corruption Among Students Preparing for a Police Profession**) MAGYAR RENDÉSZET 6 pp. 79-92. , 14 p. (2016)
7. *A közlekedési balesetmegelőzés rendszerének információs folyamatai. (***The lnformation Process of Road Traffic Accident Prevention System***)* In: Gaál Gyula, Hautzinger Zoltán (szerk.) A határrendészettől a rendészettudományig. 332 p. Pécs: MHT Határőr Szakosztály Pécsi Szakcsoportja, 2016. pp. 239-246. (Pécsi Határőr Tudományos Közlemények; 17.) (ISBN:978-963-12-7484-4)
8. *A közlekedésrendészet feladata a közúti közlekedésben Rudnay Béla rendeletétől napjainkig.* (**Traffic Policing since Béla Rudnay**) SZAKMAI TUDOMÁNYOS FOLYÓIRATA (2010-) 3: pp. 54-66. (2017)

9. *A sebességtúllépés szerepe a Budapesten bekövetkezett halálos közúti balesetekben 2015-ben (***The Role of Overspeeding in the Lethal Road Accidents in Budapest in Year 2015**) In: Orbók-Barkovics Veronika, Orbók Ákos (szerk.) Hadtudomány és a XXI. század. 177 p. Konferencia helye, ideje: Budapest, Magyarország, 2017.02.22-2017.02.23. Budapest: Doktoranduszok Országos Szövetsége, 2017. pp. 113-130. (A hadtudomány és a XXI. század)
10. *Pest megye baleseti adatainak elemzése.* (**Analysis of Pest County's Traffic Accidents' Data**) HADTUDOMÁNYI SZEMLE 10:(4) pp. 506-523. (2017)
11. *A közlekedésibaleset-megelőzés rendszerének információs folyamatai.* (**The lnformation Process of Road Traffic Accident Prevention System**) MAGYAR RENDÉSZET 2: pp. 129-139. (2017)
12. *A sebességellenőrzés szerepe a baleset-megelőzésben.* (**The Role of Speed Control in Accident Prevention**)HADTUDOMÁNYI SZEMLE 11:(2) pp. 287-301. (2018)
13. *Sebességhatárok és baleseti statisztikák az Európai Unióban.* (**Speed Limits and Accident Statistics in the European Union**) BELÜGYI SZEMLE: A BELÜGYMINISZTÉRIUM SZAKMAI TUDOMÁNYOS FOLYÓIRATA (2010-) 66. évfolyam : 9. szám pp. 107-130. , 24 p. (2018)
14. *Mészáros, Gábor A halálos motorkerékpáros balesetek és a sebességtúllépés összefüggéseinek vizsgálata* (**The Analysis of the Correlation Between Fata Mororciclist Accidents and Overspeeding**) 2014-2015-ben, KÖZLEKEDÉSTUDOMÁNYI SZEMLE 2018. évi 6. szám

Curriculum Vitae

Work experiences

2013 -	National University of Public Service, Faculty of Law Enforcement, Department of Public Safety Occupation or position: assistant professor Main activities and responsibilities: Tutoring of Traffic Police Studies, Practice Management, Driving Strategies Instructions, Mentoring of Students'Scientific Conference
2004-2013	Adyliget Police Technical School Occupation or position: head rapporteur, principal officer Main activities and responsibilities:: Education, Practical Education, Technical Education, Driving Strategies Instructor, Education Documents Management and Development , Signs and symptoms instructor, COPPRA instructor, Red Man intsructor
2001-2004	Budapest Police Technical School Senior teacher Main activities and responsibilities:Education of traffic studies, technical education, driving strategies studies
1996 –2001	Budapest Police Headquarter Traffic Policing Major Department Accident Division Examination Subdivision Occupation or position: Examiner, head examiner, commissioned department manager.

	Main activities and responsibilities: Examination of road accidents with severe personal injuries that qualifying as crime cases. Professional management of examiners and head examiners of the department.
1994 –1996	Hungarian Maritime Service, Occupation or position: sailor cadet Main activities and responsibilities: Navigation, steering, maintenance and logistics of sea trade cruisers
1989 –1990	Hungarian Shipping Company Occupation or position: ordinary sailor Main activities and responsibilities: Navigation, steering, maintenance and logistics of sea trade cruisers

Education

1984 – 1988	I. István High School, Budapest
1990 – 1993	Széchenyi István College, Institute of Transport and Logistic, Department of Transport operating engineer, Transport operating engineer
1990 – 1993	Széchenyi István College, Institute of Transport and Logistic, Department of Transport operating engineer, naval officer
2005 - 2009	University of Szeged Faculty of Arts in Pedagogy

Other Studies

1992	University of Huddersfield, Department of Transport and Distribution TEMPUS scholarship student
1993-1994	Kossuth Lajos Military College (military service)
1996-1997	Advanced Level Police Officer Technical Training
2002	Police Education and Training Centre driving instructor
2004	John von Neumann Computer Society, European Computer Driving License
2006	Ministry of Inner Affairs Police and Crime Prevention Institute, Police Professional Examination
2007	Interact Defense, Police Red Man instructor
2008	Police Head action tactics instructor
2009	DEKRA Akademie ADR controller
2011	Norwegian Police, Politihogskolen Signs and Symptoms of the use of narcotics and other psychotropic substences Instructor
2012	European Commission Directorate-General Home Affairs Prevention of and Fight Against Crime of the European Union Community Policing Preventing Radicalisation and Terrorism (COPPRA) Instructor
2014-2017	National University of Public Services, PhD education, PhD candidate

Other language(s)

English intermediate (B2) combined, German vantage (B2) combined

Membership in Professional Forum:

- Association of Traffic Science, General Traffic Section Traffic Law and Directory Department Secretary
- National Univerity of Public Service, Faculty of Law Enforcement secretary of faculty scientific students ' associations
- National Association of Law Enforcement PhD Students