

Summary of professional achievements

1. Name and Surname:

Marian Żuber

2. Awarded diplomas and degrees:

2.1. Master's degree in Chemistry (specialty - protection against contamination) – awarded in 1988 – Technical Military Academy in Warsaw

Title of master's thesis: „*Ongoing of active coals catalyzed metaloporfirines and metaloftalocyanines*”

2.2. Diploma of PhD in technical sciences in engineering of environment protection awarded by means of resolution passed by the Scientific Board of Faculty of Environment Protection Engineering of the Wrocław University of Technology – awarded in 1997r.

Title of doctoral dissertation: „*Burden of soil and plant environment by selected heavy metals in the region of copper works influence*”.

2.3. Certificate of Postgraduate Studies in Euroatlantic Security and Integration, 10 June 1999, realized by Pultusk Academy of Humanities.

2.4. Certificate of Postgraduate Studies No 877 from 28 February 2004 – Workshop of European Union Broker, organized by Technical Military Academy in Warsaw.

3. Information on previous employment in scientific units:

3.1. 1992 – 1994; Military Academy of Military Engineering in Wrocław (Department of Chemical Protection Troops) – lecturer.

3.2. 1994 – 1996; Tadeusz Kościuszko Military Academy in Wrocław (Department of Chemical Protection Troops) – head of laboratory.

3.3. 1996 – 2002; Tadeusz Kościuszko Military Academy in Wrocław (Department of Science) – adjunct.

3.4. 2002 – 2004; Tadeusz Kościuszko Military Academy in Wrocław – Head of Scientific Department.

3.5. 2004 – 2006; Military Academy of Land Forces in Wrocław – Head of Department of Support Operations.

3.6. 2006 – 2008; Military Academy of Land Forces in Wrocław (Faculty of Basic Problems of Technic) – vice-Dean.

3.7. 2008 – 2012; Tadeusz Kościuszko Military Academy of Land Forces in Wrocław (Management Faculty) – vice-Dean.

3.8. od 02.2012 - Tadeusz Kościuszko Military Academy of Land Forces in Wrocław (Command Institute) – adjunct.

4. Achievements under Article 16 clause 2 of the Acts as of 14 March 2003 on academic degrees and academic title and degrees and title in art (Journal of Laws No. 65, item 595 as amended)

a) title of the achievement:

„Weapon of Mass Destruction in Terrorists Activity”.

b) (author/authors, title of work, name of publisher, place and year of publishing):

M. Żuber, *Weapon of Mass Destruction in Terrorists Activity*, Publisher Difin S.A., Warszawa 2015. s. 201, ISBN - 978-83-7930-963-4.

c) description of the scientific aim of the above-mentioned work and achieved results along with a description of their potential application:

The monograph „*Weapon of Mass Destruction in Terrorists Activity*” concerns the problem of the potential threat of using weapon of mass destruction by contemporary terrorists groups as a method of realization of assumed goals. Using a comprehensive way comprising all kinds of weapon of mass destruction – WND (nuclear, radiological, chemical and biological weapon), the motives of reaching for weapon of mass destruction by terrorists, methods of its using and scenarios of threats for its various types have been presented. The complement to considerations is an overview of international legislation (conventions, agreements), whose main goal is the limitation of proliferation of mass destruction weapon danger, especially its interception by terrorists.

The monograph presents the results of long-term research conducted on the basis of available references describing the cases of attempts to acquire and use WMD. The publications involving monographs, reports and articles from scientific journals and information from daily press were used. The majority of sources were American publications where regular and in-depth analyses of the threat with that phenomenon are carried out and where instances of mass destruction weapon usage have been spotted.

The choice of this subject is not accidental because the problem of using weapon of mass destruction in military conflicts has interested me since my studies. As this type of

weapons was employed in the most spectacular terrorists attacks (in Tokyo subway and after anthrax attacks in New York) I have directed my attention to this area. In my research I have analyzed ideological movements of organizations which wanted to use unconventional weapon, methods applied during preparing and carrying out terrorists attacks and their results for society which is jeopardized by its effects.

These researches being the mainstream of my exploration activity resulted in a number of articles which were published in monographs, books, scientific journals and papers from domestic and international conferences. The summary of this activity is this monograph. It is the addition to some exploration area which is seldom discussed in our country because of the opinion that there is little probability of this kind of attack.

The perspective of using weapon of mass destruction in terrorists attacks perturbs many experts and members of special forces who fight against terrorists in many western countries, especially in the United States where this problem is top priority. In fact, chemical and biological weapons and radiological weapon known as „dirty bombs” have been within the grasp of terrorists for a long time but most of them were not interested in the possibility of using them. Only few organizations have tried to get access to WMD and even fewer have really threatened to use or used this kind of deadly tools (np. Weather Underground or Aum Shinrikyo – Supreme Truth). According to experts this cautiousness was the result of fear of international community revenge which could concentrate all efforts in order to detect and destroy the organization. Undoubtedly, another important factor was the anxiety about the effects of using weapon of mass destruction which are well known in history. However, with time the leaders and members of terrorist groups started more extensively to show the wish not only to equip themselves with this weapon, but also to use it. The ideas and goals, which inspire contemporary terrorists organizations and radical military groups, show that they could use this deadly weapon to fulfill their aims. This in turn could lead to apocalyptic annihilation of mankind if results of attacks could not be tackled.

The leader of Al-Kaida – Osama bin Laden in his declarations many times was talking that extermination of unbelievers and collapse of American economy is necessary. According to him it is the main obligation of Muslims. For realization of this idea they could use all available means, including weapon of mass destruction. The aspiration for building worldwide caliphate by contemporary radical islamic organizations could be a reason to use such serious arms for realization of their goals. There is no doubt, it could help in creation of credibility and position of the organization, especially when it loses initiative and supremacy

over the enemy. However, it is scary to think what kind of effects it could have on the world and on the Islamists themselves.

The eagerness of international society to eliminate the weapon of mass destruction from arsenals of all countries in the world and the fight against its proliferation by crime and terrorist organizations is so important that it requires all the effort. The best way of realizing this goal are international conventions which are joined by more and more countries and which should eliminate this danger.

During the study the attempt to resolve the main research problem formulated as the following question was undertaken:

How serious is the danger of using the weapon of mass destruction in terrorist activity carried out by contemporary organizations whose main tools of achieving their goals are fear and violence?

Solving the main research problem requires the answers to additional questions which are detailed researching problems:

1. What kind of organizations would aim at acquiring and using the weapon of mass devastation in their activity?
2. What kind of methods of using weapon of mass destruction would dominate in terrorists attacks?
3. What are potential scenarios of using particular kinds of unconventional weapon and what will be their influence on the growth of danger and victims rate among people who will be in the outreach of its influence?
4. What kinds of activity in the prevention of WMD proliferation are undertaken by international community and what impact it has on the preventing of access to weapon by radical organizations which use violence as their main instrument?

Solving the main research problem has fixed formulation of the research goal which was determined as:

The assessment of occurrence likelihood of the threat of using mass destruction weapon by contemporary terrorists organizations, defining kinds of groups which could aspire for it, methods of its using and scenarios which could be employed by terrorists in the case of decision to use unconventional weapon during attacks.

In order to realize the research process directed at obtaining the answer to the question included in the research problem, the following assumption of possible solution, in other words the **working hypothesis has been formulated:**

The danger of using weapon of mass destruction by contemporary terrorists organizations is a real threat for international security but the level of the threat depends on gaining the access to the weapon by terrorists and preparing the society to the effects of its potential usage.

The collected testing material has been presented in three chapters. The first one describes the problems connected with the subject matter of weapon of mass destruction and its characteristics in order to realize the effects of its impact on the environment which determine the ways of counteracting in the situations when specific kind of weapon will be used. These results have been associated with potential terrorist attacks in which the weapon could be used. The main definitions describing the term *weapon of mass destruction* have been presented. The main attributes that make it especially attractive for contemporary terrorists have been indicated.

The analysis of literature, the results of which have been presented in the second chapter, has shown that the threat of using weapon of mass destruction is not only a hypothetical phenomenon and the experience of some countries proves that it is fully realistic. The effects which could result from using this kind of weapon depend mainly on the type and range of influence. They could occur immediately and cause significant losses and they could occur after longer time, which does not mean that in consequence the number of victims will be insignificant. Some types of the weapon of mass destruction (e.g. biological weapon) is characterized by its unpredictability in terms of its effects on people and animals and directions of spread.

In the third chapter the issue of action against proliferation of weapon of mass destruction conducted on international forum and its influence on global security has been presented. The goal of initiatives undertaken by organizations of collective security such as the United Nations Organization and some regional bodies is to reduce the risk of the membership access of the countries which are suspected of supporting the terrorists organizations. It is to prevent potential help in acquiring raw materials for production or transferring weapon of mass destruction.

In the final part of the monograph the characterization of the selected potential chemical and biological agents, which could be used in terrorists attacks, has been placed. The selection

of these agents was made based on their properties and information about terrorists being interested in them in the past.

Using of weapon of mass destruction in terrorist attacks may lead to serious consequences which are connected with enormous human costs, destruction of important elements of susceptible national infrastructure, serious healthy consequences among people who were near the place of attack. It is connected with the necessity of action aimed at elimination of weapon of mass destruction effects, which requires considerable financial input for its realization.

The monograph is one of the few studies published in Poland about weapon of mass destruction threat in terrorist attacks and the first research paper which comprehensively covers this subject considering all types of unconventional weapon.

In conclusion, in my opinion the contribution of contents included in the monograph „Weapon of mass destruction in terrorists activity” to security sciences, can be testified by:

- comprehensive conceptualization of issues of the weapon of mass destruction threat in terrorists activity and orderliness of the knowledge in this area,
- assessment of how feasible is the threat of using weapon of mass destruction by terrorists,
- identification of methods and ways of terrorists attacks by accomplishment of scenarios of using all types of weapon of mass destruction characterization.
- analysis of the potential possibilities of international community to counteract against the proliferation of mass destruction weapon with particular reference to its takeover by terrorists organizations.

The monograph could make a valuable material both for study and research on the potential threats for our country with special regard to terrorism. It should be of interest to specialists dealing with threat problem and students who study national security, homeland security and international relations.

5. Description of other scientific and research achievements

After finishing the secondary technical school of chemistry and passing school leaving exams in 1983 I started to study chemistry in Technical Military University in Warsaw in specialization – protection of the military against contamination. During my studies I gained essential knowledge and developed my interests connected with using weapon of mass destruction in military conflicts. It was possible thanks to my activity in student scientific association for chemists which worked in Chemistry and Technical Physics Faculty. The result of my

studies was the master's thesis connected with searching for catalysts which accelerate reactions of chemical poisoned substances marked on active coal which is an absorber in gas masks. The title of my master's thesis was *Ongoing of active coals catalyzed with metaloporphirines and metaloftalocyanines*.

After studies I began military service in 3rd Chemical Regiment in Biskupiec Reszelski. In 1990 I was moved to Military Academy of Military Engineering in Wrocław where I began service as a teacher and Head of Chemical Laboratory in Department of Chemical Defence. The realization of different research projects connected with protection against weapon of mass destruction and testing protection equipment which was introduced to the army against contamination, allowed me to acquire and improve both the skills of doing research and teaching. In 1992 I began PhD studies at Environment Engineering Faculty in Wrocław Technological University. During studies I was the author and co-author of some papers in environment protection area and a member of research team which realized the project "*Identification of pollutions present in the atmosphere and setting of concentration distribution as a function of distance from sources of emission as a basic to assessment and predicting of nature environment threat in Rudna district*". The project was realized for the Committee of Scientific Researches in cooperation with CBRM Cuprum.

At this time I was a teacher in T. Kościuszko Military Academy of Land Forces in Wrocław. As the author and co-author I have published 6 student books for the subject of instrumental analysis, 7 articles and reports published in scientific journals and conference papers and 3 reports from practice researches.

The culmination of my PhD studies and researches realized as part of the promoter grant was the dissertation entitled „*Burden of soil and plant environment by selected heavy metals in the region of copper works influence*” and its public defense. After that the Board of Environment Engineering Faculty conferred me the doctor of technical sciences degree in engineering of environment protection.

In doctoral dissertation I have proposed and described the mathematic model of contribution of selected heavy metals in the system: air – soil – plants near copper mines and factories (KGHM). The model was verified on the grounds of data which were collected in the area where the level of contamination by heavy metals was elevated.

In the period 2002-2012 I was a member of Scientific Board of the Academy of Land Forces where I was the president of Scientific Commission (2002-2004).

In 2002 I started work as the Head of Scientific and Research Department, where I have worked since 1996 as an adjunct. In this period I actively cooperated with the Committee of Scientific Researches.

After bioterrorists' attacks in the United States (2001) I started research on the assessment of threats resulting from the possibility of using weapon of mass destruction in terrorists activity. I have continued this next period of my scientific interests in the following years up till now.

In 2004 I started work as a Head of Operations Support Department in the Institute of Command in Military Academy of Land Forces in Wrocław. In this period I continued my scientific activity in terrorism area apart from being involved in didactics.

In 2005 I developed the concept and organized a cyclic scientific conference entitled „Natural and civilization disasters”. During its ten editions I was the president of organizing committee and the member of its scientific board.

In 2006 I started work as the vice-Dean of Basic Problems of Technics Faculty, and then (2008), after the transformation in the Academy, the vice-Dean of Management Faculty. As a member of Faculty Board I was vice-President of the Board (2009-2010 and 2011-2012), and in the years 2008 – 2009 and 2010-2011 I performed the function of President of the Management Faculty Board.

In 2009 I directed a team and participated in the works connected with preparing a request to the State Accreditation Commission for granting the entitlement to open the studies of 1st and 2nd level in National Security. The Faculty has obtained the required qualification for teaching in this field of study.

Currently, after finishing my military career (2012) I work as an adjunct in the Institute of Command in T. Kościuszko Military Academy of Land Forces in Wrocław.

Since my doctoral dissertation exam I have published some publications, organized some scientific conferences and completed some scientific works, which were connected with security area. But the main stream of my scientific activity is focused on the terrorism threat, especially the possibility of using weapon of mass destruction in terrorists attacks.

The detailed list of published scientific works and precise information about my didactic achievements, scientific cooperation and popularization of science is presented in Appendix 4 to this paper. The summary of my previous scientific and didactic output after obtaining the doctor of technical sciences degree is matched as follows:

5.1. Works

A measureable result of my previous scientific activity are publications including the authorship of: 1 monograph, 11 monographs – scientific editing, 3 monographs - scientific co-editing including 1 in English published in *Institute for Security and Development Policy* in Stockholm, 2 academic books, 15 articles in scientific and popular scientific journals including 3 in English, and 42 chapters in books, including 6 in English.

Moreover, the paper presented during an international conference in Sibiu (Romania) „*Agroterrorism - A Threat To The Agricultural Sector*” is soon to be published. Furthermore, I am working on the monograph *Protection of critical infrastructure – good practices* (it is planned to be completed in November 2015).

After PhD degree my publishing activity at the beginning comprised the continuation of the problems connected with environment protection, but with time the focus of my interests shifted again towards the potential usage of weapon of mass destruction in terrorists activity. In spite of different issues in the security area this subject was the main stream of my scientific interests. The basic part of publications is connected with my achievements and among the most important can be listed:

1. M. Żuber, *Terrorism and Combating Against Terrorists Threat*, MALF Wrocław 2013, p. 183, ISBN 978-83-63900-20-5 – Academic book.
2. M. Żuber, *Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction. Part I*, *Journal of Science. Opinion and Experiences*. Wrocław 1999 No. 2, pp. 43-50.
3. M. Żuber, *Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction. Part II*, *Journal of Science. Opinion and Experiences*. Wrocław 1999 No. 3, pp. 56-68.
4. M. Żuber, J. Szczypińska, *Bioterrorism - new face of terrorism*, *Journal of Science. Opinion and Experiences*. Wrocław 2001, No. 3, pp. 180-199.
5. M. Żuber, *Can EBOLA Virus Become a Tool in Terrorists Hands?* [in:] *Chemical and Biological Terrorism – Activity of the Army and Non-military Institutions in Crisis Situations*, *Journal of Science. Opinion and Experiences. Special edition*, Wrocław-Szklarska Poręba 2002, pp. 209-222.
6. M. Żuber, R. Kuliś-Orzechowska, S. Sawczak, *Zoonotic diseases as the agents in bioterrorism* [in:] *Chemistry for Agriculture vol.3, Chemical Products in Agriculture and Environment*. Edited by H. Górecki, Z. Dobrzański. Czech-Pol Trade. Prague – Brussels 2002, pp. 441-447.
7. M. Żuber, J. Leśniak, *Bacteria, Viruses and Toxins in the Aspect of Biological Warfare and Bioterrorism* [in:] *Toxics and Hazardous Substances- Detection and Utilisation. Journal of Science. Opinion and Experiences. Special edition*. Wrocław - Szklarska Poręba 2001, pp. 141-149.

8. M. Żuber, ***Bioterrorism – Historical and Philosophical Reflection*** [in:] *Educational Threats of the Beginning 21st Century*, ELIPSA Publisher, Poznań-Warszawa 2003, pp. 205-211.
9. M. Żuber, S. Sawczak, ***Weapon of Mass Destruction Threat in Aspect of Terrorists Activity*** [in:] *Contribution of Polish Army Units in the International Peace Operations in the Years 1973-2003: Selected Problems*. D. Kozerański (ed.). National Academy of Defence. Warszawa 2004, pp.54-64.
10. M. Żuber, ***Weapon of Mass Destruction vs. Activity of Disarmament Commissions in Irak***, *Journal of Science MALF*. Wrocław 2004, pp. 154-168,
11. M. Żuber, ***Agroterrorism – Threats and preparedness*** [in:] *Chemistry for Agriculture vol. 6, Development in production and use of new agrochemicals*. Edited by H. Górecki, Z. Dobrzański, P. Kafarski. Czech-Pol Trade. Prague – Brussels 2005, pp. 576-581.
12. M. Żuber, ***Using of Non-lethal Biological and Chemical Substances in View of International Law*** [in:] *Toxics and Hazardous Substances- Detection and Utilization*. S. Prądzyński (ed.). MALF Wrocław 2005, pp. 33-40.
13. M. Żuber, ***Ricin – The potential bioterrorists agent*** [in:] *Chemistry for agriculture vol.7. Chemistry and biochemistry in the agricultural production, environment protection, human and animal health*. Edited by H.Górecki, Z.Dobrzański, P.Kafarski. Czech-Pol Trade. Prague – Brussels 2006, pp. 1004-1012.
14. M. Żuber, ***Using of Weapon of Mass Destruction Threat in Terrorists Attacks*** [in:] *Natural and Civilization Disasters. Threats and Crisis Management*. M. Żuber (ed.). MALF Wrocław 2006, pp. 131-141.
15. M. Żuber, ***Agroterrorism – Threat for Agricultural Sector*** [in:] *Natural and Civilization Disasters. Modern Terrorism – Political, Social and Economical Aspects*. M. Żuber (ed.). MALF Wrocław 2006, s. 155-161.
16. M. Żuber, ***Modern Terrorism as a Global Threat*** [in:] *Natural and Civilization Disasters. Modern Terrorism – Political, Social and Ekonomical Aspects*. M. Żuber (ed.). MALF Wrocław 2006, pp.9-14.
17. P. Maciejewski, M. Żuber, ***Prognostication of the Pollution After Emission of Industrial Toxics Substances as a Result of the Terrorists Activity*** [in:] *Natural and Civilization Disasters. Modern Terrorism – Political, Social and Ekonomical Aspects*. M. Żuber (ed.). MALF Wrocław 2006, pp.189-202.
18. M. Żuber, ***Non-lethal Chemical and Biological Substances. Part I***. *Journal of Science MALF Wrocław 2006*, No. 4, pp. 26-41.
19. M. Żuber, ***Non-lethal Chemical and Biological Substances. Part I***. *Journal of Science MALF. Wrocław 2007*, No. 1, pp. 61-75.
20. M. Żuber, ***Protection Against Weapon of Mass Destruction in the Aspect of Superterrorism Threat*** [in:] *Natural and Civilization Disasters. Civilizations Threats of the Beginning 21st Century*. M. Żuber (ed.), MALF Wrocław 2007, pp. 61 – 68.
21. M. Żuber, ***Mobile Laboratories of WMD Protection as an Element of the Pollution Detection System*** [in:] *Natural and Civilization Disasters. Civilizations Threats of the Beginning 21st Century*. M. Żuber (ed.), MALF Wrocław 2007, pp.353-361.
22. M. Żuber, ***Education of Society Toward Terrorists Danger*** [in:] *Education for security. Regional Security. Educational Challenges*. D. Czajkowska-Ziobrowska, A. Zduniak (ed.), University of Security, Poznań 2008, pp. 561-570.

23. P. Maciejewski, M. Żuber, M. Ulewicz, K. Sobianowska, ***Removal of Radioisotopes from Waste Water After „Dirty Bomb” Decontamination*** [in:] *Physicochemical Problems of Mineral Processing*, 43(2009), pp. 65-72
24. M. Żuber, ***Nuclear Terrorism – Threat for Global Security*** [in:] *Evolution of Terrorism at the Turn of 20th and 21st Century*, M. Malinowski, R. Ożarowski, W. Grabowski (ed.), University of Gdańsk Publisher, Gdańsk 2009, pp. 235-251.
25. M. Żuber, ***Terrorists Attack with Using of Nuclear Weapon as an Example of a Threat with High Level of Intensity*** [in:] *Crisis Management – Different Faces*. R. Grocki (ed.), Lower Silesian University of Public Service „Asesor”, Wrocław 2010, pp. 61-76.
26. M. Żuber, ***Nuclear Terrorist Attack as an Example of Serious Threat*** [in:] *Different Faces of Security: From Knowledge to Management*, Edited by K. Raczkowski, W. Kegö, M. Żuber, Institute for Security and Development Policy, Stockholm 2010. pp. 93-112.
27. M. Smolarek, M. Żuber, ***The Roots of Turkish Terrorism*** [in:] *The Issues of Security in Public Administration*. T. Okrasa (ed.). Administration. Society Series. No. 4. Wyższa Szkoła Administracyjno-Społeczna, Warszawa 2010, pp. 127 – 134.
28. M. Żuber, ***Proliferation of Nuclear Weapon vs. Global Security*** [in:] *The Issues of Security in Public Administration*. T. Okrasa (ed.). Administration. Society Series. No. 4. Wyższa Szkoła Administracyjno-Społeczna, Warszawa 2010, pp. 75 – 100.
29. M. Żuber, ***Nuclear-Weapon-Free Zones in the Asia and Pacific Region in the Context of Global Security*** [in:] *Faces of Competitiveness in Asia Pacific*. Edited by Bogusława Skulska & Anna H. Jankowiak, Research Papers of Wrocław University of Economics, Publishing House of Wrocław University of Economics, Wrocław 2011, pp. 100 – 113.
30. M. Żuber, ***Creation of Nuclear Free Zones vs. Global Security*** [in:] *Education for Security. Służby Special Services in the National System of Security. Political Aspects of security*. M. Ilnicki, A. Piotrowski (ed.), University of Security, Poznań 2012, pp. 465 – 475.
31. M. Smolarek, M. Żuber, ***Contemporary Terrorism as a Global Threat*** [in:] *Contemporary Defence Studies*, Nicolae Balcescu Land Forces Academy, Sibiu (Romania) 2013, pp. 18-23.
32. M. Żuber, ***Education of Local Community in the Range of Counteraction Terrorists Threat*** [in:] *Education for Security in Local Communities*, M. Marcinkowski, M. Żuber (ed.), Humanistic Academy Publisher in Leszno, Leszno 2013, pp. 211-231.
33. W. Pellowski, M. Żuber, Z. Zamiar, ***CBRN threats for infrastructure of gas distribution and its potential influences on the national system of critical infrastructure*** [in:] *Solution of Crisis Situation in the Specific Environment*, 19th International Scientific Conference, Žilina 2014, pp. 585-591.
34. M. Żuber, ***National Critical Infrastructure as an Area of Potential Terrorists Influence*** [in:] *The Yearbook of International Security*, vol. 8, no. 2, Lower Silesian University, Wrocław 2014, pp. 178-197.
35. W. Pellowski, M. Żuber, Z. Zamiar, R. Pich, ***Ability to Conduct Decontamination of Gas Transmission Infrastructure After a CBRN Attack***, *Journal of Environmental Protection, Safety, Education and Management*, vol. 2, No 4, 2014, p. 43-48.
36. M. Żuber, ***Weapon of Mass Destruction in Terrorists Activity – Assessment of Potential Threat*** [in:] *Terrorism Yesterday and Today. 10 Years of Terrorism Research*

Centre Collegium Civitas. K. Liedel i P. Piasecka (ed.), Difin, Warszawa 2015, pp. 102-121.

37. M. Żuber, *Danger of Using Ebola virus in the Bioterrorists Attack* [in:] M. Kopczewski, A. Kurkiewicz, S. Mikołajczak (ed.), *Paradigm of researches about security. Individuals, groups and societies*, vol. 3, University of Security, Poznań 2015.

5.2. Papers delivered at domestic and international conferences and seminars and active participation in organizational committees of international and domestic scientific conferences

Scientific lectures given on domestic and international conferences proved to be very important for my scientific development and for promulgation of research results. The subjects were connected with widely understood problems of security, and threat of modern terrorism. In total after doctoral degree I actively participated in 22 domestic and international conferences where I presented papers and statements which were published in conferences material and other books. During conferences I actively participated in discussions about terrorism and fighting against it.

As part of scientific activity I have developed a concept and have organized ten editions of cyclical conference „Natural and Civilization Disasters”, in which I was the head of organizational committee and member of scientific committee. The conference took place in 2005 in Wrocław, and from 2006 till 2014 in Słok near Bełchatów. The participants were from Poland and from abroad (the United States, Denmark, Germany, Austria, the Czech Republic, the Slovak Republic, Ukraine).

For many years I was a member of organizational committees in international conferences „Education of 21st Century” and „Paradigm of tomorrow” organized by Security Academy in Poznań.

In 2012 I was a member of scientific committee and vice president of domestic scientific conference „Education for security in local society” which was organized on 26st of April 2012 by Humanistic Academy in Leszno.

A very important expression of my contribution to knowledge dissemination within international cooperation was my participation in organizing international conferences in the security field:

- „*Armed Forces in the System of International Security*” - periodical conference organized by MALF in Wrocław – member of scientific committee and

- *“The 21st International Scientific Conference Knowledge-Based Organization”* - organized in 2015 by Academia Fortelor Terestre „Nicolae Balcescu” in Sibiu (Romania) – member of scientific committee.

The detailed list of all conferences in which I actively participated is in Appendix 5.

5.3. Heading and participation in research projects

A very important element of my scientific growth was the realization of scientific projects. In the years 2000-2014 I participated in 10 projects – 6 as a head and 4 as a member of a team. Among the most important realized research projects connected with terrorism and weapon of mass destruction are:

- *Evolution of the Goals and Methods of Activity of the Modern Terrorists Groups*
- *Influence of the Political situation in Middle East Countries on the Activity of Terrorists Organizations.*
- *Proliferation of the Nuclear Weapon as a Threat for Global Security.*

For my didactic and scientific activity I was twice distinguished by Commandant Rector of Military Academy of Land Forces (individual award of first degree in the year 2005 and 2011).

Now, as part of research activity I conduct a team working on a project: *„Implementation of the European Programme for Critical Infrastructure Protection in the Selected Member Countries as An Element of Increasing of European Union Internal Security”* (planned term of completing – December 2016). The project is realized in cooperation with gen. Milan Ratislav Stefanik Military Academy in Liptovsky Mikulas (Slovak Republic).

5.4. Didactic activity and information about international cooperation

I have been engaged in didactic activity since 1992. As a teacher for 10 past years (2005-2015) I have realized about 2660 didactic hours in gen. T. Kościuszko Military Academy of Land Forces and in other academies (University of Wrocław – national security, Lower Silesian University in Wrocław - national security, University of Security in Poznań, Poznań Trade and Commerce College – national security, Academy of Management and Banking – homeland security). Teaching included many forms of the classes: lectures, workshops, practice and seminars. The classes were conducted as part of full-time and part-time studies for the bachelor and master degrees, post graduate studies and courses for officers. Among realized subjects I can enumerate: Terrorism and fighting against it, Weapon of mass destruction, Characterization of contemporary threats, Public security, Selected problems of

national and international security, Crisis management, Environment protection, Ecological security. Moreover I conduct diploma seminars for students of bachelor and masters studies. The complement of my teaching is the realization of the classes on postgraduate studies in Crisis management: „*Characterization of contemporary threat*”.

As part of didactic activity I directed a team and participated in the works connected with preparing the request to National Accreditation Commission to obtain the certificate for studies of 1st and 2nd level in field of study National Security. In 2009 the Faculty received the required qualifications for teaching in this field of study. I am an author and co-author of study programs for full-time and part-time bachelor and master studies which have been realized since 2010.

A significant area of my didactic activity are lectures in foreign universities. So far I have given a series of five hour lectures as part of Erasmus Programme in gen. Milan Ratislav Stefanik Military Academy in Liptovsky Mikulas (Slovak Republic) in subject: „*Terrorism and fighting against it*”.

Within the international cooperation I have disseminated the results of activities in research during conferences and in the proceedings which were prepared with partners from abroad. The book in which I participated as a scientific co-editor and author of one of the chapters was: *Different Faces of Security: From Knowledge to Management*. It was published in 2010 together with Institute for Security and Development Policy in Stockholm.

In 2015 I was invited to join the Organising Committee of the 21st International Scientific Conference Knowledge-Based Organization, organized by przez Nicolae Balcescu Land Forces Academy in Sibiu - Romania (11-13.06.2015).

5.5. Scientific support for students and doctorate students as a supervisor or subsidiary promoter

As part of support for students I have been promoter of 24 postgraduate theses, 18 master theses, 36 bachelor theses and 5 engineer theses. In this academic year I am promoter of 16 – master theses and 12 bachelor theses. Moreover in the graduate process of the students I have prepared 130 reviews of diploma theses.

Since 2015 I have been performing the function of subsidiary promoter in two doctorates. The subjects of the doctoral thesis are in national security field:

- *The Role of Volunteer Fire Brigades in National Fire and Rescue System As the Examples of Wieruszów District*- expected term of finishing doctoral thesis – 2017.

- *Concept of Security Guarantee of Big Urban Area in Context of Public Administration Tasks* - expected term of finishing doctoral thesis - 2016.

5.6. Internships

As part of cooperation with other scientific and academic institutions I have realized internship in:

- Armed Forces Academy of General Milan Ratislav Stefanik in Liptovsky Mikulas as part of European Union Programme ERASMUS - one-week internship (January 2014).
- Naval Academy in Gdynia – two-week scientific internship in the period March-May 2015.
- Terrorism Research Center at Collegium Civitas in Warsaw - two-week scientific internship in June 2015.

5.6. Membership in international and domestic organizations and scientific associations

1. European Association for Security – ordinary member
2. Polish Society of Political Sciences, Department -Wrocław, Section of international relationships – ordinary member
3. Polish Geopolitical Society, Department -Wrocław – President of Department
4. Polish Society of the Science About Security, Department -Wrocław – ordinary member
5. In the years 2003-2004 - member of Higher Council of Military High Schools and Science in Ministry of Defense

5.7. Participation in expert and competition team

In the years 2005-2010, on assignment of Scientific Researches Committee and then Ministry of Science and Higher Education I cooperated in reviewing of applications and final reports from realization of research projects in security.

In 2007 I participated in preparing a custom-made expertise for Power Plant Opole entitled: *„Expert opinion on BOT Elektrownia Opole S.A. terrorists attack and related threats possibility (sabotage, propaganda actions which intrude territorial integrity of object)* – as part of expert team of Center of Strategic Studies and Prognosis of Academy of International Studies in Łódź, 2007.

In 2006 for the Center of Studies and Strategic Prognosis of the International Studies Academy in Łódź I reviewed the report entitled „*Terrorists Attacks Threat in Poland. Report 2006*”.

In the period 2002-2008 I reviewed 14 articles published in *Journal of Science. Opinion and Experiences*. At present I am a thematic editor of scientific journal of MALF - „Zeszyty Naukowe Wyższa Szkoła Oficerska Wojsk Lądowych im. gen. Tadeusza Kościuszki Journal of Science of the gen. Tadeusz Kościuszko Military Academy of Land Forces”.

Wrocław, 09.10.2015

.....*Zuber Marjan*.....