

## Information about Authors

### **Marian Bojko (1979)**

At the present time he is working on the VSB-TU Ostrava, Faculty of Mechanical Engineering, Department of Hydromechanics and Hydraulic Equipment as assistant manager of department. He is school leaver of field hydraulic and pneumatic equipment Faculty of Mechanical Engineering VSB-TU Ostrava, which he finished in 2002. Primary objective of work is educational activity (teaching of object Mechanics of liquids, Method of finite volume in flow, 3D flow, etc.). Within of research he deals with numerical modeling of turbulent and laminar flow in various energy applications including of heat transfer and radiation, 3D analysis in metallurgical processes multiphase flow with heat transfer, combustion of gaseous, liquid and solid fuel including of chemical reaction. He participated on the solutions of projects GACR, MPO, COST respecting problems of heat and mass transfer.

### **Stanislav Bradka (1949)**

The Head of the National Institute for Nuclear, Chemical and Biological Protection, Pribram. He specializes in toxicology, radiation and biological protection.

A graduate of the Charles University in Prague, Faculty of Medical Hygienics (1974); Ph.D. in the branch Fire Protection and Safety (Faculty of Safety Engineering, VSB ó Technical University, Ostrava 2010).

He is a member of the Scientific Board of the Faculty of Safety Engineering, VSB ó Technical University in Ostrava.

### **Irena Cespirova (1962)**

The Head of Mobile Group Department of the National Radiation Protection Institute (SURO), graduated (Ing.) in 1986 of Faculty of Nuclear Science and Physical Engineering of the Czech Technical University in Prague. Her specialization is Emergency Preparedness and Response in the field of Radiation Protection, aimed at decision support for Crisis Management and field monitoring. She participates on the design, development of methodologies and on operation of the Czech Radiation Monitoring Network (RMS), especially for the Mobile Monitoring parts of RMS (ground and airborne). She participates on Security Research Projects both on national and international levels.

### **Otto Dvorak (1947)**

Deputy director of the Technical Institute of Fire Protection, General Directorate of Fire-brigade of the Czech Republic.

Head of research and development department. He specialized himself on fire research and development, fire safety of buildings, fire cause investigations, and application of statistics and likelihood in fire safety.

Graduate of the College of Chemical Technology, Faculty of Chemical Technology in Prague in 1970. He defended his doctoral thesis on šThe issue of determining the concentration of explosion limits of flammable gases and vapors of flammable liquids at VSB ó Technical University of Ostrava, Faculty of Safety Engineering, in 1999.

In his professional practice he has published many expert statements, and research reports. He is an author or co-author of six monographs and many standards (ISO and EN). He is a member of several expert working groups of technical commissions (ISO, CEN, and IEC), technical normalized commissions by CNI, and the Ministry of Interior representative for accreditation of Certification Authorities by CIA Prague.

## **Jan Eichler (1952)**

He works as a research worker at the Institute of International Relations, Prague. He specializes in international security relations.

Graduate of Military Academy, Bratislava (1974).

He is an author of 8 professional monographs, 5 articles published in world databased journals, and 55 articles in reviewed journals in the Czech Republic, Slovakia, France, Germany, Poland, Turkey and Romania; leader of 5 and co-author of 15 grant projects.

## **Stanislav Florus (1963)**

He is an NBC Defence Institute of University of Defence employee. He occupies a position of deputy director of above mentioned institute. He devotes to education within subject concerning individual and collective protection and protection against Toxic Industrial Chemicals in a framework of pedagogical work. He deals with problems related to construction of devices and tools of individual and collective protection and to testing materials used for individual protection's construction and non-tough devices for collective protection in the framework of experimental work.

In 1986 he graduated from the Military College of Ground Forces in Vyskov, branch of Military Chemistry. In 1991 he finished the Ph.D. study program at the Military Academy of Chemical Protection in Moscow and he gained a title of Ph.D. of technical sciences. In the year of 1996 he habilitated in a branch of Force and Inhabitants Protection at the Military College of Ground Forces in Vyskov.

He is an author or a co-author of 15 university textbooks, more than 40 papers in scientific publications and skilled information in conference proceedings of both national and multinational conferences, more than 20 scientific works and studies and 2 military rules. He has taken a part in 1 research intention and 2 projects solution.

## **Wojciech Gizicki (1976)**

Sociologist and political scientist at Chair of International Relations, Institute of Political Science, Faculty of Social Sciences, The John Paul II Catholic University of Lublin, Poland (PhD in 2006).

**His research practice embraces the fields** of international security, european integration and cooperation within the Visegrad Group (V4). He is the author, editor or co-editors of 12 books (e.g.: *Polityczne uwarunkowania bezpieczeństwa europejskiego*, Torun 2008; *European Union-present and future*, Lublin 2009; *Od Układu do Paktu. (R)Ewolucyjna zmiana w polityce bezpieczeństwa Polski*, Lublin 2011). The main editor of *Człowiek-Społeczeństwo-Państwo*, social and political project, since 2010 it is published by Adam Marszałek Publishing House. He is also Founder of Instytut Socjologiczno-Lubelski, NGO in Poland.

## **Jiri Halaska (1956)**

He is an Assistant Professor at the Faculty of Biochemical Engineering of the Czech Technical University in Prague. He specializes in population protection, critical infrastructure, and crisis management and economics.

He is a Graduate of Military Ground Forces Academy in Vyskov (1979); Ph.D. in Economics and Management (University of Defense, Brno 2007).

He published in area of crisis management and state security policy. He is an Academic Senate member of the Biochemical Engineering Faculty of the Czech Technical University in Prague.

## **Radek Hofman (1983)**

He is a postdoc at the Institute of Information Theory and Automation of the Czech Academy of Sciences. He received his Diploma (Ing.) in Software Engineering and his Doctorate (Ph.D.) in Mathematical Engineering, in 2006 and 2011, respectively, both from the Faculty of Nuclear Sciences and Physical Engineering of the Czech Technical University in Prague. His doctoral thesis "Application of Advanced Data Assimilation Methods in Off-site Consequence Assessment" was awarded by the Czech Nuclear Society. His research interests include mathematical modeling of environmental processes, Bayesian filtering and software development for decision support.

## **Zdenek Hon (1981)**

He is a Deputy Head of the Department of Medicine and Humanities of the Faculty of Biomedical Engineering of the Czech Technical University in Prague. In his professional activities he deals with crisis management, toxicological aspects of chemical accidents and the potential misuse of hazardous substances.

He graduated from the University of South Bohemia in Ceske Budejovice, the Faculty of Social Health in the field of Crisis Radiobiology and Toxicology (2007). He is currently studying a PhD study at the Faculty of Special Engineering University of Zilina in the program of Crisis Management (civil security field of study).

A co-investigator of 5 grant projects and a principal investigator of the project focused on the issue of terrorism. He regularly publishes in scientific journals at home and abroad, and also actively participates in international conferences. Further he is the member of the Society for Radiobiology and Crisis Planning of the Czech Medical Society of Jan Evangelista Purkynje, and the member of the Academic Senate of the Czech Technical University in Prague.

## **Lubos Jurik (1958)**

He is a lecturer at the Slovak Agricultural University in Nitra, Department of Landscape Engineering. He is engaged in the research of the landscape engineering issues, water works, water mains and sewers, irrigation and drainage.

He is a graduate from the University of Agriculture, Faculty of Irrigation and Drainage - Landscape Engineering, Nitra (1982).

His work is devoted to anti-erosion protection, irrigation, water reservoirs and modification of agricultural flow; risks analysis in the plans of water supplies in crisis situations; modeling of river basins, prospectively

drainage structures run in the lowlands, modeling of a possible course of flooding on the river flows, protection of waters against hazardous substances, the course of levels during flood flows, modeling of risks in water supplies in crisis situations.

### **Milada Kozubkova (1952)**

Currently she works at VSB-TU Ostrava, Faculty of Mechanical Engineering, Department of hydromechanics and hydraulic devices as a head of department. She graduated the Faculty of Natural Sciences at the Palacky University in Olomouc in 1975. The bases of the work are pedagogical activity (teaching in subject as Fluid Mechanics, Method of Finite Volume, Modeling and Simulation of Hydraulic Mechanisms, etc.). Her research work is focused on numerical modeling of viscous fluid flow in 2D and 3D regions in field of hydromechanics, hydraulics, but especially in ecological problems of atmospheric pollutant, solution of permanent and risk pollutant sources. At present the research field is enlarged in to the heat transfer with fuel combustion and chemical reaction. She is investigator or coo-investigator of the grants as COST, EUREKA, GACR concerning the environment pollution.

### **Jaroslav Krutil (1985)**

He currently studies the second year of postgraduate study at the Technical University of Ostrava, Faculty of Mechanical Engineering, Department of hydromechanics and hydraulic devices. Is a graduate of the master's course of study at the Faculty of engineering VSB-TU Ostrava field of Design and process engineering, which ended in 2009. He graduated from the Bachelor's study at the Faculty of engineering VSB-TU Ostrava branch of hydraulic and pneumatic machinery and equipment which ended in 2007. In the framework of the doctoral studies deals with the numerical modeling of heat transfer by burning and flame in the living rooms, the combustion of solid and liquid fuels and chemical reactions in their burning in 3D areas.

### **Petr Kuca (1954)**

The Head of Emergency Preparedness Division of the National Radiation Protection Institute (SÚRO), graduated (Ing.) in 1979 of Faculty of Nuclear Science and Physical Engineering of the Czech Technical University in Prague. His specialization is Emergency Preparedness and Response in the field of Radiation Protection, aimed at decision support for Crisis Management based on combination of both mathematical modelling of radiation situation and prognoses of its possible development based dispersion of radioactive material into environment and real data on radiation situation obtained from field monitoring. He participates on the design, development of methodologies and on operation of the Czech Radiation Monitoring Network (RMS), especially for the Early Warning Network and Mobile Monitoring parts of RMS. He participates on Security Research Projects both on national and international levels.

### **Jan Kyselak, (1962)**

Assistant Professor at Civil Protection Department, Faculty of Economics and Management, University of Defence in Brno, where he deals with the population protection, particularly areas of collective protection of the population, humanitarian assistance, training and education in the field of population protection, etc.

He graduated from the Military Academy in Brno, Faculty of the Type of Troops and Services, branch Military ground construction (1987). In2009 he defended his Ph.D. title in the field of population protection.

As an author or co-author he published many articles both at home and abroad, and a number of textbooks and teaching aids. He has participated in solving various scientific projects in the area of civil protection and crisis management.

### **Petr Martinovsky (1986)**

In 2010 he graduated at Security and Strategic Studies Programme of Faculty of Social Science, Masaryk University, Brno. Now he is PhD. student on Detachment for Security and Strategic Studies of Department of Political Science on mentioned Faculty. Among other he takes part in research project "Predictive methods of long-term geopolitical development in Central Europe". He specializes in environmental security, security threats from degradation of environment and in analysis of alternative energetic policies. Author work also in the Center for Security Studies and is a former member of editorial board of server about security [www.sekuritaci.cz](http://www.sekuritaci.cz).

### **Leos Navratil (1954)**

He is the head of the Department of Medicine and Humanities at the Faculty of Biomedical Engineering, Czech Technical University in Prague. He graduated from the Faculty of General Medicine at Charles University in Prague (M.D.) (1978), is a Candidate of Sciences in Internal Medicine (= Ph.D.) (Charles University, 1984), Associate Professor of Radiobiology at Military Medical Academy of Jan Evangelista Purkyně in Hradec Kralove (1997), and he is also the Professor of Forces and Population Protection (University of Defense in Brno, 2006). He is a member of several scientific, editorial and professional boards in the Czech Republic and abroad. His professional work is devoted to issues of clinical radiobiology, possibilities of using lasers in medicine and disaster medicine. He is the Chairman of the Society for Radiobiology and Crisis Planning of the Czech Medical Society of Jan Evangelista Purkyně.

### **Vaclav Navratil (1986)**

He is a specialist at the Czech Technical University in Prague, Faculty of Biomedical Engineering, Department of Medicine and Humanities. He specializes in information technology and management.

He graduated from the Czech Technical University in Prague, Faculty of Biomedical Engineering (2011).

### **Pavel Otrisal (1972)**

He is an NBC Defence Institute of University of Defence employee. He occupies a position of special assistant of Chemical Corps section of above mentioned institute. He devotes to education within theoretical subjects concerning combat and operational employment of Czech Armed Forces Chemical Corps in a framework of pedagogical work. He deals with problems related to testing of materials used for individual protection's protective properties in the framework of experimental work.

In 1994 he graduated from the Military College of Ground Forces in Vyskov, branch of Military Chemistry. In 2007 he began the Ph.D. study program Force and Inhabitants Protection, branch of Weapons of Mass Destruction, harmful substances and protection against them at the University of Defence.

He graduated from the professional study program of "Public Relations" within the consequent education at the Institute of Law and Legal Science in Prague.

In his practice he has published so far 60 papers in both national and international conference proceedings and 11 articles in scientific publications. He is a co-author of 5 university textbooks. He has taken a part in 1 research intention and 2 projects solution.

### **Petr Pecha (1943)**

He has experiences in reactor physics and thermo-hydraulic analysis of reactor cores. He is also experienced in modelling of radioactivity propagation into the living environment, probabilistic approach to analysis of radiation accident consequences, assimilation of model predictions with observations. He participated in customization of European decision system RODOS for the Czech territory. Developer of environmental system HARP for analysis of radioactivity propagation and assimilation subsystem ASIM for improvement of model predictions using observations incoming from terrain. Manager of the project VG20102013018 provided by Ministry of the Interior of the Czech Republic. More information on web: [asim.utia.cas.cz](http://asim.utia.cas.cz)

### **Jan Pivovarnik (1954)**

A research and development worker of MI ó General Directorate of FRS CR, Population Protection Institute, Department of Expertise for Fire Protection and Means of Population Protection. He specializes in research, development and testing of the means of collective protection.

He is a graduate of Military Academy in Martin, Engineer-Technical branch (1978).

He is a co-author of 1 professional publication, author or co-author of a number of articles in reviewed or non-reviewed journals and proceedings, 5 opponent, lecturer and expert reports, 3 methodical instruments, 5 textbooks and 4 learning tools, and he processed 2 technical standards.

### **Jozef Rosina (1956)**

He is a Dean of the Faculty of Biomedical Engineering, Department of Medicine and Humanities of the Czech Technical University in Prague. He is specialized in biophysics, nuclear medicine and medical technology.

He is a graduate from the State Medical University in Moscow (1981), Ph.D. in the field of preventive medicine (3rd Medical Faculty of Charles University in Prague, 2008). Over the past 5 years he published 13 articles in impacted journals. He is a Vice-President of the Czech Society of Medical Physics of the Czech Medical Society of Jan Evangelista Purkynje. He is also the chairman of the Scientific Council of the Faculty of Biomedical Engineering of the Czech Technical University in Prague, the member of the Scientific Board of the Czech Technical University in Prague. Further the member of the Scientific Council of the GRADA publisher, the chairman of the editorial board of the journal Physician and Technology. He is a member in subject councils: Biophysics (Charles University in Prague), Biomedical and Clinical Technology (Czech Technical University in Prague).

### **Jozef Sabol (1944)**

He is an Associate Professor at the Czech Technical University in Prague, Faculty of Biomedical Engineering, Department of Medicine and Humanities. He is specialized in the dosimetry and the application of ionizing radiation. He gives lectures on the application of ionizing radiation in medicine including radiation protection, he is involved in several research projects.

He is a graduate from the Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering (1967). A Candidate of Science in the field of physical and mathematical sciences at the same school (1971), A Doctor of Science in the field of physical and mathematical sciences (Mathematics and Physics Faculty of Charles University in Prague, 1990); Associate Professor of Applied Physics (Faculty of Nuclear Sciences and Physical Engineering of the Czech Technical University in Prague, 1978).

He is a reviewer of grants and projects at home and abroad, a reviewer of expert articles and papers, a member of the Czech Society for Radiation Protection, a member of two other international companies in the field of radiation protection.

## **Jaroslav Tupy (1958)**

Co-owner and executioner of the company Crisis Consulting, Ltd., Uherske Hradiste. He deals with flood-protection projects, flood plans, evidence of damages, and flood news.

A graduate of J. E. Purkynje University (Masaryk University) in Brno, Faculty of Natural Sciences, Theoretical Cybernetics, Mathematical Informatics and System Theory (RNDr. 1982).

Until 2010 he had served as a director of the Crisis Management Branch at the Faculty of Logistics and Crisis Management of the Tomas Bata University in Zlin. He participated in organization of 4 conferences 6 Issue of Crisis Management in Regions. He publishes in the issue of drinking water supply to population during the emergency situations or monitoring of flood affected area using the pilotless means. He participated in flood relief efforts in the Liberec region in 2010.

## **Jana Zalesakova (1961)**

Co-owner and executive head of the company Crisis Consulting, Ltd., Uherske Hradiste. She deals with flood-protection projects, hydro-engineering structures and water utilization.

A graduate of Slovak Technical College in Bratislava, Faculty of Building, Water Utilization and Hydro-Engineering Structures specialization (1985).

She is focused on assessing the impact of polders on reducing the flood risk, evaluation of natural disasters damages (floods, redevelopment after landslips and soil erosion), and design preparation of flood protection grant applications to municipalities and cities.