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# CVs of the specialists from the Contractor conducting implementation and initial training, and the initial training program

## CVs of the specialist from the Contractor conducting implementation at the premises of the End-User and initial training

Implementation on-site and initial training on-site will be conducted by specialists of ABmerit as follows:

1. Mr. Peter Čarný (1958), nuclear engineer, chief of the project of ESTE;
2. Mr. Ľudovít Lipták (1982), PhD., nuclear physicist, nuclear emergency specialist;
3. Mr. Miroslav Chylý (1973), software engineer, GIS engineer, nuclear emergency specialist;
4. Mrs. Eva Fojcíková (1984), PhD., GIS engineer, nuclear emergency specialist;

The CVs of ABmerit specialists are enclosed below:

### Mr. Peter Čarný (1958), nuclear engineer, chief of the project of ESTE

Curriculum Vitae:

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| --- |
| Personal information |
| Name |  | **ČARNÝ, Peter** |
| Telephone |  | +421 33 55 13 345 |
| E-mail |  | carny@abmerit.sk |
| Nationality |  | Slovak Republic |

|  |  |
| --- | --- |
| Date of birth | 13.10.1958 |

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| --- | --- | --- |
| **Occupation,** **/Field of interest** |  | Nuclear Engineering, Nuclear and radiological emergency preparedness, Environmental impacts assessment. |
| Work experience |
|  **•** Dates (from – to) |  | 01.07.1997 - until now |
| **•** Name, address of employer |  | ABmerit, s.r.o., Hornopotočná 1, 917 01, Trnava, Slovakia |
| **•** Type of business or sector |  | Technical support and consultancy for nuclear power plants and crisis centers in the field of nuclear/radiological safety and emergency response.Research and development in the field of nuclear and radiation safety, emergency preparedness and software engineering |
| **•** Occupation or position held |  | project manager, owner of the company |
| **•** Main activities and responsibilities |  | - main architect and leader of projects;- professional communication with customers.- specialist in nuclear and radiological safety- nuclear and radiological emergency preparedness: Algorithms, methodology and chief of the team for support of the crisis staffs*-*- main architect and leader of the project of computer code ESTE - program for source term evaluation during severe accident at NPPs ;- main architect and leader of the project "Catalogue of source terms of European NPPs";- main architect and leader of the project "Catalogue of countermeasures in case of radiological accident";- consultant in the field of personal dosimetry and radiation protection;- preparing of procedures and methods for personal, environmental and ambient dosimetry during normal and emergency conditions ;- analyses of doses for the purpose of equipment qualification at NPPs;number of staff supervised: up to 10 |

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| **•** Dates (from – to) |  | 01.07.1992 – 30.06.1997 |
| **•** Name, address of employer |  | Merit s.r.o,, Trnava, Slovakia |
| **•** Type of business or sector |  | Radiation and nuclear safety |
| **•** Occupation or position held |  | project manager and co-owner |
| **•** Main responsibilities |  | consultant in the field of radiation protection ;preparing of procedures and methods for personal, environmental and ambient dosimetry;application of IAEA, ICRP, ICRU recommendations and regulatory body demands to the conditions of customers (especially NPPs);preparing of procedures and algorithms for radiation protection;calculations and analyses of airborne and liquid effluents/releases impact to the environment;professional communication with customers.number of staff supervised: up to 5 |

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| **•** Dates (from – to) |  | 01.08.1983 – 30.06.1992 |
| **•** Name, address of employer |  | VÚJE a.s., Trnava, Slovakia |
| **•** Type of business or sector |  | Research in the field of nuclear power plants |
| **•** Occupation or position held |  | research worker |
| **•** Main activities and responsibilities |  | research of personal and environmental dosimetry methods;application of modern dosimetry methods to personal and environmental radiation protection;survey of radiation fields;application of international recommendations to the practice of radiation protection;number of staff supervised: up to 3 |
| Education and training |
| • Dates (from – to) |  | 1978-1983 |
| • Name, type of organisation providing education  |  | Prague Technical University, Czechoslovakia, Faculty of Nuclear Science and Physical Engineering: |
| • Principal subjects/occupational skills covered |  | the major field of study: methods of dosimetry, methods of spectrometry, physics of ionizing radiation, radiation protection |
| • Title of qualification awarded |  | MSc. degree: Nuclear Engineering - Dosimetry and Application of Ionizing Radiation, certificate No. C\*170772 obtained: 1983/ 06/ 01 |

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| • Dates (from – to) |  | 1986-1988 |
| • Name, type of organisation providing education  |  | Postgraduate study: Comenius University, Bratislava, Czechoslovakia, Faculty of Maths and Physics; |
| • Principal subjects/occupational skills covered |  |  2-years postgraduate course on "Nuclear Energy and the Environment" |
| • Title of qualification awarded |  |  certificate obtained: 1988/ 09/ 15 |

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| Personal skills and competences |
| Mother tongue |  |  **Slovak** |

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| Other languages |
|  |  | **English** |
| Reading, writing and verbal skills |  | Excellent, excellent, excellent. |
|  |  | **Russian** |
| Reading, writing and verbal skills |  | Excellent, excellent, excellent. |
|  |  | **Czech** |
| Reading, writing and verbal skills |  | Excellent, good, good. |

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| **Technical and Professional skills**  |  | architect of nuclear emergency response systemsLicensed and long term experienced in using PC COSYMA, INTERRAS, NRC Dose, MICROSHIELD, MCNP and SCALE code |
| Organizational and Social skills  |  | Team spirit, leader of the team, long-term collaboration with teams at institutes at home and abroad.Experienced in software project management through the full life cycle. |

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| Additional information |  | PUBLICATIONS**Journals:** 1) Čarný,P., Morávek,J., Baček,D., Lieskovský,M. CMEA Intercomparison of Environmental Thermoluminescence Dosemeters, Radiat.Prot.Dosim. 27, 115-118, (1989), Nuclear Technology Publishing, Great Britain (in English) 2) Čarný,P., Lieskovský,M. Beta Dosimetry at Nuclear Power Plants, Radiat.Prot.Dosim. 37, 123-126, (1991), Nuclear Technology Publishing, Great Britain (in English) 3) Šujak,P.,Čarný,P.,Prouza,Z.,Hermanská,J. Energy Spectra of Stray Neutron Fields at PWR NPP, Radiat.Prot.Dosim. 19, 179-182, (1987), Nuclear Technology Publishing, Great Britain (in English) 4) Prouza,Z..,Hermanská,J.,Sujak,P.,Čarný,P. Need of Neutron Personnel Dosimeters at NPPs, Kernenergie 29, (1986) (in English) 5) Čarný,P.,Morávek,J.,Lieskovský,M. Long Term Monitoring of Doses in the Environment by TLD Method, Jaderná energie 34/3, 93-98, (1988) (in Slovak) 6) Spurný,F., Pinák,M., Čarný,P., Morávek,J., Prouza,Z., Nikodemová,D. Evaluation of Personal Neutron Dosimeters in the Fields at NPP WWER 440, Jaderná energie 35/1, 20-25, (1989) (in Czech)**Patents:** 1) Čarný,P.,Lieskovský,M. Neutron Monitor, Czechoslovak Patent No. 270163**Conferences:**1. Čarný,P., Smejkalová, E., et al. (2009) ESTE EDU- large update of decision support system for the Crisis Staff of the SÚJB ČR. In Sborník – XXX I. Conference of Radiological Safety, Kouty nad Desnou, Czech republic, ISBN 978-80-01-04430-8
2. Suchoň, D., Smejkalová, E., Čarný,P., et al. (2010) Parallel Computing For Radiological Impacts Assessment During Nuclear Accident. In: Joint International Conference on Supercomputing in Nuclear Applications and Monte Carlo 2010 (SNA + MC2010) 2010.Tokyo, Japan
3. Carný,P., Starostová, V., Hofer,P.: Data exchange between the *este systems* at the SÚJB Prague and at the BMLFUW Vienna in case of emergency, paper presented at the Conference on Radiological Safety, Liptovský Ján, 2005
4. Carný,P., Starostová, V., Chudá,H.: Source terms catalogue of European nuclear power plants for the emergency response, poster presented at symposium on Off-site Nuclear Emergency Managementthe Conference on Radiological Safety, Rhodes, Greece, 2004
5. Carný,P.: Results of the common Czech - Austrian calculations of BDBA radiological consequences (Melk - Process), paper presented at the Conference on Radiological Safety, Luhačovice, 2004
6. Carný,P., Chylý,M., Nabizada,J., Hrnko,T.: "*este*" - code for source term estimation and radiological impacts assessments in case of nuclear accident, paper presented at the Conference on Radiological Safety, Luhačovice, 2004
7. Carný,P.: *"este"* - Approach to VVER severe accident releases and VVER off-site emergency management, poster: Int. Symp. on Off-site Nuclear Emergency Management, Salzburg, 2003

Carný, P. and Cabáneková, H.: Requirements and needs of off-site emergency management regarding radiation monitoring in the pre-release and release phase, poster at: Int. Symp. on Off-site Nuclear Emergency Management, Salzburg, 20031. Čarný,P.: Proposal to perform deterministic calculations to compare software codes, Workshop of the WG Item 7a) Implementation of the Brussels Agreement, Vienna, May 2002
2. Baček,D., Čarný,P. Release Assessment to the Hermetic Zone of WWER 440 NPPs Based on the Response of Hermetic Zone Area Monitors", 3th Int.Workshop on Real-Time Computing of the Environmental Consequences of an Accidental Release to Atmosphere from Nuclear Installation, Schloss Elmau,Oct.1992
3. Čarný,P. Czechoslovak Airborne Monitoring System During and Following Nuclear Accidents, paper presented at the IAEA Technical Committee Meeting "Utilization of Airborne Monitoring Systems during and following Nuclear Accidents Situations", Vienna 1990
4. Čarný,P.,Lieskovský,M. Cosmic Rays response of some TL Dosemeters, paper presented at Seminar on Radiation Protection Physics, Gaussig, Germany, 1988
5. Čarný,P.,Morávek,J., Lieskovský,M. CMEA Intercomparison of TLD for Monitoring of the Environment, paper presented at The CMEA Workshop, Leningrad, 1987

**PROJECTS:**1. Member of author team of ESTE codes: for group of programs which serve as instruments for source term evaluation and calculation of radiological impacts in case of nuclear / radiological accident or as instruments for impacts evaluation of NPP normal operational radiological effluents.
2. Project IAEA MODARIA -1 (2011-2015): MODELLING AND DATA FOR RADIOLOGICAL IMPACT ASSESSMENTS (MODARIA) PROGRAMME (Working Group 5: “Uncertainty and Variability Analysis for Assessments of Radiological Impacts Arising from Routine Discharges of Radionuclides”).
3. Project IAEA MODARIA -2 (2016-ongoing): MODELLING AND DATA FOR RADIOLOGICAL IMPACT ASSESSMENTS (MODARIA) PROGRAMME (active participation in sections: a) Assessment of Fate and Transport of Radionuclides Released in the Marine Environment, and b) Assessments and Control of Exposures to the Public and Biota for Planned Releases to the Environment).
4. Project OECD NEA (2012-2015): “Benchmarking of fast-running software tools used to model releases during nuclear accidents”, document NEA/CSNI(2015)19.
5. Project JRC/EC: (2015-2016) UDINEE - Urban Dispersion International Evaluation Exercise (Advancing approaches to the evaluation of urban scale modeling systems).
6. Project HORIZON 2020/EURATOM: FASTNET - FAST NUCLEAR EMERGENCY TOOLS, (2015-2019, EC Grant Agreement no.662284).
 |

### Mr. Ľudovít Lipták (1982), PhD, nuclear physicist, nuclear emergency specialist

Curriculum Vitae:

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|  |
| Personal information |
| Name |  | **LIPTÁK Ľudovít** |
| Telephone |  | +421 33 55 13 345 |
| E-mail |  | liptak@abmerit.sk |
| Nationality |  | Slovak Republic |
| Date of birth |  17.3.1982 |

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| --- | --- | --- |
| **Occupation,** **/Field of interest** |  | Nuclear physics, nuclear and radiological emergency preparedness, Environmental impacts assessment. |
| Work experience |
| **•** Dates (from – to) |  | 01.10.2010 - until now |
| **•** Name, address of employer |  | ABmerit, s.r.o., Hornopotočná 1, 917 01, Trnava, Slovakia |
| **•** Type of business or sector |  | Technical support and consultancy for nuclear power plants and crisis centers in the field of nuclear/radiological safety and emergency response.Research and development in the field of nuclear and radiation safety, emergency preparedness and software engineering |
| **•** Occupation or position held |  | Specialist – nuclear physicist |
| **•** Main activities and responsibilities |  | - Specialist in nuclear and radiological safety and nuclear emergency preparedness.- Nuclear and radiological emergency preparedness: Algorithms, methodology and member of the team for support of the crisis staffs.- Preparing of nuclear accident scenarios for nuclear facilities and crisis centers.- Specialist focused on solving nuclear, physical and engineering problems.- Collaboration at safety analyses and creating algorithms of the programs ESTE.- Modelling of radiation transport, focused on detector responses and radiation protection.- Specialist in modelling of dispersion processes – in the atmosphere (urban environment, mesoscale and regional scale) and in the water environment (marine and freshwater systems). |

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| **•** Dates (from – to) |  | 23.9.2009 – 31.1.2010 |
| **•** Name and address of employer |  | Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovakia |
| **•** Type of business or sector |  | Slovak Academy of Sciences |
| **•** Occupation or position held |  | Scientist in the field of nuclear and subnuclear physics |
| **•** Main responsibilities |  | Independent solving of partial problems of science and technology |
|  |  |  |
| Education and training |
| • Dates (from – to) |  | 2005-2009 |
| • Name, type of organisation providing education  |  | Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovak republic |
| • Principal subjects |  | Nuclear and subnuclear physics, computational and numerical simulations of subnuclear particles, QCD |
| • Title of qualification awarded• Level in national classification  |  | Philosophiae doctor (PhD.)ISCED 8 |
| • Dates (from – to) |  | 2000-2005 |
| • Name, type of organisation providing education  |  | Faculty of mathematics, physics and informatics, Comenius University, Bratislava, Slovak republic |
| • Title of qualification awarded |  | Magister (Mgr.), equivalent to the degree of Master of Sciences |
| • Level in national classification  |  | ISCED 7 |
| Personal skills and competences |
| Mother tongue |  |  **Hungarian, Slovak** |
| Other languages |
|  |  | **English** |
| Reading, writing and verbal skills |  | excellent, excellent, excellent. |
|  |  | **German** |
| Reading, writing and verbal skills |  | good, good, good. |

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| **Technical and Professional skills**  |  | Licensed user of the codes MCNP, SCALE. Experiences with PC CosymaKnowledge of programing languages: Fortran, JAVA  |
| **Additional information** |  | **PROJECTS:**1. Member of author team of ESTE codes: for group of programs which serve as instruments for source term evaluation and calculation of radiological impacts in case of nuclear / radiological accident or as instruments for impacts evaluation of NPP normal operational radiological effluents.
2. Project IAEA MODARIA -1 (2011-2015): MODELLING AND DATA FOR RADIOLOGICAL IMPACT ASSESSMENTS (MODARIA) PROGRAMME (Working Group 5: “Uncertainty and Variability Analysis for Assessments of Radiological Impacts Arising from Routine Discharges of Radionuclides”).
3. Project IAEA MODARIA -2 (2016-ongoing): MODELLING AND DATA FOR RADIOLOGICAL IMPACT ASSESSMENTS (MODARIA) PROGRAMME (active participation in sections: a) Assessment of Fate and Transport of Radionuclides Released in the Marine Environment, and b) Assessments and Control of Exposures to the Public and Biota for Planned Releases to the Environment).
4. Project OECD NEA (2012-2015): “Benchmarking of fast-running software tools used to model releases during nuclear accidents”, document NEA/CSNI(2015)19.
5. Project JRC/EC: (2015-2016) UDINEE - Urban Dispersion International Evaluation Exercise (Advancing approaches to the evaluation of urban scale modeling systems).
6. Project HORIZON 2020/EURATOM: FASTNET - FAST NUCLEAR EMERGENCY TOOLS, (2015-2019, EC Grant Agreement no.662284).

**PUBLICATIONS**:**Contributions on scientific conferences**1. C. Gattringer and L. Liptak: Thermodynamical quantities for overlap fermions with chemical potential, 25th International Symposium on Lattice Field Theory, Regensburg, Germany, Aug 2007. Published in PoS LAT2007:205,2007.
2. L. Liptak, S. Olejnik: First evidence for Casimir scaling in G(2) lattice gauge theory, príspevok na 8th Conference on Quark Confinement and the Hadron Spectrum: Confinement8, Mainz, Germany, Sep 2008. Published: PoS CONFINEMENT8:058,2008.
3. L. Liptak, P. Čarný: Calculation of conversion factors using MCNP for estimation of real release into the atmosphere by means of response of teledosimetric system in case of an accident in NPP, XXX II. Conference of Radiological Safety, Trebon, Czech republic, ISBN 978-80-01-04647-0, Nov. 2010.

**Publications in scientific journals:**1. C. Gattringer and L. Liptak, „Energy density for chiral lattice fermions with chemical potential,“ Phys. Rev. D76, 054502 (2007) [arXiv:0704.0092 [hep-lat]].
2. L. Liptak and S. Olejnik, „Casimir scaling in G(2) lattice gauge theory,“ Phys. Rev. D78, 074501 (2008) [arXiv:0807.1390 [hep-lat]].
3. J. Danzer, C. Gattringer, L. Liptak and M. Marinkovic, „A study of the sign problem for lattice QCD with chemical potential,“ Phys. Lett. B682, 240 (2009) [arXiv:0907.3084 [hep-lat]].
4. C. Gattringer and L. Liptak, „Canonical fermion determinants in lattice QCD: Numerical evaluation and properties,“ Phys. Lett. B697 (2011) 85-89 [arXiv:0906.1088 [hep-lat]].

**SPECIAL COURSES, MAIN ACADEMIC STAY:**1. 1. 10. 2006 – 31.1.2007 – scholarship stay at Karl-Franzens Universität, Graz, Austria.
2. 1. 10. 2009 – 31.1.2010 – working position at Karl-Franzens Universität, Graz, Austria.
3. 3) 4. 11. 2011 – 11. 11. 2011 – Intermediate Training Course of MCNP5/MCNPX, Imperial College, London, UK
 |

### Mr. Miroslav Chylý (1973), software engineer, nuclear emergency specialist

Curriculum Vitae:

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|  |
| Personal information |
| Name |  | **CHYLÝ Miroslav** |
| Telephone |  | +421 33 55 13 345 |
| E-mail |  | chyly@abmerit.sk |
| Nationality |  | Slovak Republic |
| Date of birth |  19.12.1973 |

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| --- | --- | --- |
| **Occupation,** **/Field of interest** |  | Software engineer, Nuclear and radiological emergency preparedness, Environmental impacts assessment. |
| Work experience |
| **•** Dates (from – to) |  | 01.07.2000 - until now |
| **•** Name, address of employer |  | ABmerit, s.r.o., Hornopotočná 1, 917 01, Trnava, Slovakia |
| **•** Type of business or sector |  | Technical support and consultancy for nuclear power plants and crisis centers in the field of nuclear/radiological safety and emergency response.Research and development in the field of nuclear and radiation safety, emergency preparedness and software engineering |
| **•** Occupation or position held |  | Specialist – software engineering in nuclear emergency response systems |
| **•** Main activities and responsibilities |  | - ESTE systems development (full SW life cycle). - Specialist in development and management of systems for nuclear and radiological safety and nuclear emergency preparedness.- Comprehensive development of programming environments. - Modelling of radionuclides in the environment.- Experienced and skilled expert on emergency scenarios preparation. |
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| Education and training |
| • Dates (from – to) |  | 1992-1997 |
| • Name, type of organisation providing education  |  | Slovak Technical University in Trnava, Faculty of Materials Science, Department of Applied Informatics, Slovak Republic |
| • Principal subjects/occupational skills covered |  | software engineering and informatics |
| • Title of qualification awarded |  | Magister (Mgr.), equivalent to the degree of Master of Sciences |
| • Level in national classification  |  | ISCED 7 |
| Personal skills and competences |
| Mother tongue |  |  **Slovak** |
| Other languages |
|  |  | **English** |
| Reading, writing and verbal skills |  | good, basic, good |
|  |  | **Russian** |
| Reading, writing and verbal skills |  | good, good, good. |

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| **Technical and Professional skills**  |  | Expert knowledge of C / C + +, C # Expert knowledge of SQL , databasesskill in the use of specialized software tools for complex analysis and calculations in nuclear physics, dosimetry, evaluation of the impact of accidents at nuclear power plants around |
| **Additional information** |  | **PROJECTS:**1. Member of author team of ESTE codes: for group of programs which serve as instruments for source term evaluation and calculation of radiological impacts in case of nuclear / radiological accident or as instruments for impacts evaluation of NPP normal operational radiological effluents.
2. Project IAEA MODARIA -1 (2011-2015): MODELLING AND DATA FOR RADIOLOGICAL IMPACT ASSESSMENTS (MODARIA) PROGRAMME (Working Group 5: “Uncertainty and Variability Analysis for Assessments of Radiological Impacts Arising from Routine Discharges of Radionuclides”).
3. Project HORIZON 2020/EURATOM: FASTNET - FAST NUCLEAR EMERGENCY TOOLS, (2015-2019, EC Grant Agreement no.662284).

**PUBLICATIONS**:**Contributions on scientific conferences**1. Čarný,P., Smejkalová, E., Chylý,M., et al. (2009) ESTE EU - new version with Lagrangian Particle Model In Sborník – XXX I. Conference of Radiological Safety, Kouty nad Desnou, Czech republic, ISBN 978-80-01-04430-8
2. Čarný,P., Smejkalová, E., Chylý,M., et al. (2009) ESTE EDU- large update of decision support system for the Crisis Staff of the SÚJB ČR. In Sborník – XXX I. Conference of Radiological Safety, Kouty nad Desnou, Czech republic, ISBN 978-80-01-04430-8
3. Čarný,P., Smejkalová, E., Chylý,M., et al. (2010) ESTE Annual Impacts. In Collection of Abstracts – XXX II. Conference of Radiological Safety, Třeboň, Czech republic, ISBN 978-80-01-04647-0
4. Suchoň, D., Smejkalová, E., Čarný,P.,Chylý,M., et al. (2010) Parallel Computing For Radiological Impacts Assessment During Nuclear Accident. In: Joint International Conference on Supercomputing in Nuclear Applications and Monte Carlo 2010 (SNA + MC2010) 2010.Tokyo, Japan
5. Smejkalová, E, Čarný,P., Chylý,M., et al. (2008) ESTE AI- The Program for Calculation of Radiation Doses caused by Effluents in Routine Releases to the Atmosphere and to the Hydrosphere In Collection of Abstracts - XXX. Conference of Radiological Safety, Liptovský Ján, ISBN 978-80-89384-01-3
6. Carný,P.,Chylý,M.,: New functions of the ESTE system – new possibilities for emergency response, paper presented at the Conference on Radiological Safety, Liptovský Ján, 2005
7. Carný,P., Chylý,M., Starostová, V., Hofer,P.: Data exchange between the este systems at the SÚJB Prague and at the BMLFUW Vienna in case of emergency, paper presented at the Conference on Radiological Safety, Liptovský Ján, 2005
8. Carný,P., Chylý,M., Nabizada,J., Hrnko,T.: "este" - code for source term estimation and radiological impacts assessments in case of nuclear accident, paper presented at the Conference on Radiological Safety, Luhačovice, 2004
9. Carný,P.Chylý,M., et al.: "este" - Approach to VVER severe accident releases and VVER off-site emergency management, poster at: Int. Symp. on Off-site Nuclear Emergency Management, Salzburg, 2003
 |

### Mrs. Eva Fojcíková (1984), PhD, GIS engineer, nuclear emergency specialist

Curriculum Vitae:

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|  |
| Personal information |
| Name |  | **FOJCÍKOVÁ Eva** |
| Telephone |  | +421 33 55 13 345 |
| E-mail |  | fojcikova@abmerit.sk |
| Nationality |  | Slovak Republic |
| Date of birth |  13.8.1984 |

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| **Occupation,** **/Field of interest** |  | GIS engineer, Nuclear and radiological emergency preparedness, Environmental impacts assessment, GIS –Remote Sensing |
| Work experience |
| **•** Dates (from – to) |  | 01.07.2007 - until now |
| **•** Name, address of employer |  | ABmerit, s.r.o., Hornopotočná 1, 917 01, Trnava, Slovakia |
| **•** Type of business or sector |  | Technical support and consultancy for nuclear power plants and crisis centers in the field of nuclear/radiological safety and emergency response.Research and development in the field of nuclear and radiation safety, emergency preparedness and software engineering |
| **•** Occupation or position held |  | specialist – geoinfomatics in nuclear emergency response systems |
| **•** Main activities and responsibilities |  | - Project management- Specialist in geoinformatics and remote sensing- Specialist in nuclear and radiological safety and nuclear emergency preparedness- Nuclear and radiological emergency preparedness: methodology and member of the team for support of the crisis staffs- Preparing of nuclear accident scenarios for nuclear facilities and crisis centers |
| Education and training |
| • Dates (from – to) |  | Technical University of Ostrava, Faculty of Mining and Geology, Czech Republic |
| • Name, type of organisation providing education  |  | GIS, Remote Sensing |
| • Principal subjects/occupational skills covered |  | Remote sensing, geophysics, GIS. |
| • Title of qualification awarded• Level in national classification  |  | Philosophiae doctor (PhD.)ISCED 8 |
| • Dates (from – to) |  | 2006 – 2008 |
| • Name, type of organisation providing education  |  | Technical University of Ostrava, Faculty of Mining and Geology, Institute of geoinformatics, Czech Republic |
| • Principal subjects/occupational skills covered |  | Geoinformatics, Remote sensing, geostatics, mobile geoinformatics technologies, spatial data analysis, object-oriented technologies, UML |
| • Title of qualification awarded |  | Master of Science (M.Sc.) |
| • Level in national classification • Dates (from – to)• Name, type of organisation providing education• Principal subjects• Title of qualification awarded• Level in national classification  |  | ISCED 72005 – 2008University of Matej Bel, Faculty of Natural Sciences, Institute of geography, Banska Bystrica, SlovakiaGeography (physical, political)Master of Science (M.Sc.)ISCED 7 |
| Personal skills and competences |
| Mother tongue |  |  **Slovak, Czech** |
| Other languages |
|  |  | **English** |
| Reading, writing and verbal skills |  | excellent, excellent, excellent. |
|  |  | **German** |
| Reading, writing and verbal skills |  | good, good, good. |
|  |  | **French** |
| Reading, writing and verbal skills |  | excellent, good, excellent. |
|  |  | **Spanish** |
| Reading, writing and verbal skills |  | basic, basic, basic |

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| --- | --- | --- |
| **Technical and Professional skills**  |  | GIS systems proffesional user (ESRI products, ENVI, Erdas Imagine) , Python Graphical Software (CorelDraw, Photoshop),  |
| **Additional information** |  | **PROJECTS:**1. Member of author team of ESTE codes: for group of programs which serve as instruments for source term evaluation and calculation of radiological impacts in case of nuclear / radiological accident or as instruments for impacts evaluation of NPP normal operational radiological effluents.
2. Project IAEA MODARIA -1 (2011-2015): MODELLING AND DATA FOR RADIOLOGICAL IMPACT ASSESSMENTS (MODARIA) PROGRAMME (Working Group 5: “Uncertainty and Variability Analysis for Assessments of Radiological Impacts Arising from Routine Discharges of Radionuclides”).
3. Project OECD NEA (2012-2015): “Benchmarking of fast-running software tools used to model releases during nuclear accidents”, document NEA/CSNI(2015)19.
4. Project JRC/EC: (2015-2016) UDINEE - Urban Dispersion International Evaluation Exercise (Advancing approaches to the evaluation of urban scale modeling systems).
5. Project HORIZON 2020/EURATOM: FASTNET - FAST NUCLEAR EMERGENCY TOOLS, (2015-2019, EC Grant Agreement no.662284).
6. Expert consultations to IAEA

**PUBLICATIONS**:**Contributions on scientific conferences**1. ČARNÝ, P., SMEJKALOVÁ, E., et al. (2009) ESTE EU - new version with Lagrangian Particle Model In Sborník – XXX I. Conference of Radiological Safety, Kouty nad Desnou, Czech republic, ISBN 978-80-01-04430-8
2. ČARNÝ, P., SMEJKALOVÁ, E., et al. (2009) ESTE EDU- large update of decision support system for the Crisis Staff of the SÚJB ČR. In Sborník – XXX I. Conference of Radiological Safety, Kouty nad Desnou, Czech republic, ISBN 978-80-01-04430-8
3. ČARNÝ, P., SMEJKALOVÁ, E., et al. (2010) ESTE Annual Impacts. In Collection of Abstracts – XXX II. Conference of Radiological Safety, Třeboň, Czech republic, ISBN 978-80-01-04647-0
4. SUCHOŇ, D., SMEJKALOVÁ, E., et al. (2010) Parallel Computing For Radiological Impacts Assessment During Nuclear Accident. In: Joint International Conference on Supercomputing in Nuclear Applications and Monte Carlo 2010 (SNA + MC2010) 2010.Tokyo, Japan

**SPECIAL COURSES, Workshops:**1. 10.10-13.10.2011 -Workshop "Parallel computation in modelling of radioactivity and Methods of remote sensing", Trnava. Workshop was organizes in the frame of the project "Research, development and application of advanced methods of geoinformatics, remote sensing and methods of parallel computation based on advanced hardware and software instruments, which enable parallel processing. Application of advanced sophisticated methods in radioactivity modeling and other pollutants modeling in the environment."
2. 14.-15.5.2009, European Space Agency Workshop, Slovakia. Topic "Detection of changes on landsurface using remote sensing radar data"
3. 11/2007 - Nuclear Emergency Preparedness workshop, Štrbské Pleso, High Tatras, Slovakia
4. 01/ 2005 –05/2005, Mobile Internet Learning Environment course v Institute of Technology Oulu Polytechnic, Oulu, Finland (Socrates-Erasmus program). Relevant courses : Multimedia, HTM, PHP
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# Preliminary proposal of initial training program

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| **Day 1:** |
| 1. | Introduction. |
| 2. | General introduction of delivered and implemented SW **ESTE Annual Impacts**, for calculation of radiological impacts to inhabitants due to routine discharges (atmospheric and liquid). Scheme of implementation at the premises of the End-User.Short overview of basic functions of the SW delivered.Short overview of input data needed for calculations.  |
| 3. | General introduction of the SW **ESTE Bushehr**, as Decision Support System (DSS) for the crisis staff of Bushehr NPP: **ESTE Bushehr** as system for: identification of symptoms of initiating event, identification of symptoms of the state of reactor core, identification of symptoms of the state of spent fuel pool, identification of symptoms of the state of containment, prediction of the source term,identification of symptoms of really observed release to the atmosphere of the environment,calculation of dispersion of radionuclides in the atmosphere of the envir7onment,calculation of radiological impacts to population, andrecommendation of protective measures to inhabitants.Scheme of implementation at the premises of the End-User, as real-time, 24/7 running DSS.Short overview of basic functions of the SW delivered.Short overview of input data in real time and simulation (scenario) mode. |
| **Day 2: ESTE Annual Impacts (routine discharges)** |
| 1. | Description of the GUI (graphical user´s interface), working with maps, tables, graphs, how to switch English/Russian language version, how to archive results, etc. |
| 2. | Conceptual model, exposure pathways assumed by version implemented for Bushehr NPP. |
| 3. | Dispersion model for airborne discharges. |
| 4. | Dispersion model for marine environment (liquid discharges). |
| 5. | Input data inevitable to make calculations of impacts: Content and format of data. |
| 6. | Libraries of conversion factors, transfer factors and other parameters of the SW |
| 7. | Representative person – definition, specific behaviors applied in case of BNPP |
| 8. | Training: How to run the calculations/How to enter input data/Results and how to work with results |
| 9. | How to modify or update libraries |
| 10. | Performing of calculations by participants, supervised by specialists from the Contractor.  |
| 11. | Solution of tasks by participants: How to interpret results of calculations (supervised by specialists from the Contractor). |
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| 12. | Comprehensive tests of correct run and response of ESTE Annual Impacts (комплексное тестирование). |
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| In parallel: Training of administrators of the SW **ESTE Annual Impacts**. |
| **Day 3: ESTE Bushehr (accidents)** |
| 1. | Description of the GUI (graphical user interface), working with maps, tables, graphs, how to switch English/Russian language version, how to use archive, etc., overview of GUI functions available. |
| 2. | Conceptual model, how does the program run, what are the most important algorithms applied, from symptoms of initiating event up to urgent protective measures recommended?  |
| 3. | What initiating events are considered? |
| 4. | What are the symptoms of release pathways considered? |
| 5. | What are the symptoms of the state of the core/state of spent fuel pool considered? |
| 6. | What are the symptoms of the state of containment considered? |
| 7. | Database of pre-calculated predicted source terms implemented in the program. |
| 8. | How is pre-calculated source term assimilated to really observed symptoms and conditions? |
| 9. | How are radiological impacts calculated? |
| 10. | Dispersion models implemented – description, input data. |
| 11. | How are specific intervention levels for specific urgent protective measures evaluated? |
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| 12. | Comprehensive tests of correct run and response of ESTE Bushehr (комплексное тестирование) according to prepared test plan, Part 1. |
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| In parallel: Training of administrators of the SW **ESTE Bushehr**. |
| **Day 4: ESTE Bushehr (accidents)** |
| 1. | Continuation from previous day – focus on specific tasks with the system: |
| 2. | How to turn on / turn off / restart the system? How to login to the system, logout from the system? |
| 3. | How to enter initiating event manually? |
| 4. | How to enter manually the state of the core (coolant boiling, core uncovered, core damage)? |
| 5. | How to enter manually the state of confinement tightness? |
| 6. | How to enter prognosis of source term manually? |
| 7. | How to enter real release (source term) manually? |
| 8. | How to enter manually the actual meteorological situation measured in the locality and prognosis for the locality (How to turn on/off automatic loading of wind field - GRIB, numerical weather prediction METEO)? |
| 9. | How to edit / add graphs in the Data Archive? |
| 10. | How to add / delete / edit user? |
| 11. | Short practice of specific tasks – demonstration by specialists of the Contractor. |
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| 12. | Comprehensive tests of correct run and response of ESTE Bushehr (комплексное тестирование) according to prepared test plan, Part 2. |
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| **Day 5: ESTE Bushehr (accidents) - exercises, ESTE Annual Impacts (routine discharges) - exercises** |
| 1. | How to use the SW ESTE Bushehr (accidents) in simulation (scenario) mode |
| 2. | Exercise – participants should play their roles as crisis staff members and use SW “ESTE Bushehr” as decision support system. Running of exercise supervised by specialists of the Contractor. |
| 3. | Exercise (repetition) – participants use SW ESTE Annual Impacts (routine discharges): run the calculation (input data), work with results, and interpret the results. Running of exercise supervised by specialists of the Contractor. |
| 4. | Resume of the training course, discussion. |