VARNA FREE UNIVERSITY

CHERNORIZETS HRABAR

FACULTY OF ARCHITECTURE
CONSTRUCTION OF BUILDINGS AND FACILITIES DEPARTMENT

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EDUCATION

- 1973-1978 – Master on Physics – Sofia State University, Physics Department
- 1995 - 2000 – *PhD* – INRNE, Bulgarian Academy of Sciences – Neutronics and Reactor Physics
- *2002-2004 JNC, Japan – Postdoc on Reactor Physics*

EXPERIENCE

- 1979 - 1982 Kozloduy NPP - Safety supervising physicist
- 1983 – 2002 – TU Varna, Physics dept. – Assistant professor

since 2004 – Varna Free University – Dept. of Architecture – Associated professor (since 2006)

RESEARCH

- Nuclear reactor physics and safety
- Nuclear energy
- Radiation protection

PARTICIPATION IN PROJECTS:

- FP6 NURESIM Integrated Project (2005-2008)
- FP7 NURISP Collaborative Project (2009 -2011)
- FP7 NURESAFE Collaborative Project - since 20012

CERTIFICATES , SPECIALIZATION, mobilities

- 2002 - 2004 – *Post-Doc in Japan Nuclear Cycle Development Institute (JNC) Japan*
- 2005 – 2009 – *Qualification courses on software for nuclear analyses at CEA, France (SERMA) (APOLLO2, CRONOS, SOLOME platform)*
- July 2013 Qualification international course on CTF software for thermo-hydraulic analyses-lecturer from PSU, USA RDFMG

NUMBER OF PUBLICATIONS / REPORTS : 73 /23
NUMBER OF CITATIONS : 30 *(from 2007 to 2012)*

PUBLICATIONS /2009-2013/:

1. N.Petrov, N.P.Kolev, G.Todorova, F.-X.Hugot, T.Visonneau, "TRIPOLI4 Solutions of VVER-1000 Assembly and Core Benchmarks", Proc. ANS/ENS Conf. on Mathematics & Computation and Reactor Physics, Saratoga Springs, USA, 3-7 May 2009
2. G.Todorova, N.Petrov, N.P.Kolev, F.-X.Hugot, "2D Core Solutions for VVER-1000 with APOLLO2 and TRIPOLI4", Proc. 19th AER Conf. on VVER Reactor Physics and Safety,

Varna, September 21-25, 2009 p. 167-182
3. N.Kolev, N.Petrov, G. Todorova ”Report Specifying the Necessary Cross-Sections for the VVER MSLB Benchmark to be Generated in SP1”, NURISP D3.1.3.2, May 2010 www.nurisp.org/sp1 (2010)
4. G.Todorova, N.Petrov, N.Kolev, P.Konstantinov, E.Puncheva, I.Spasov, Tz.Tzanov, N.Zheleva, M.Manolova, F.Damian (CEA) “APOLLO2 Generated Few-Group XS Library for VVER MSLB Analysis at the Nodal Level” , NURISP SP1 Meeting, Varna, Sept 29-Oct 1, 2010, CEA Publ. Database www.cea.fr/serma/
5. N.Petrov, G.Todorova, N.Kolev, F.Damian, P.Bellier. Advanced Calculation Schemes for XS Libraries Generation with APOLLO2 at the Nodal level; NURISP SP1 Meeting, Varna, Sept 29-Oct 1, 2010, CEA Publ. Database www.cea.fr/serma/
6. Galina Toorova and Nonka Jeleva . Advanced Methods for Cross--Section Libraries Generation and Data Processing , 19 th WIN GLOBAL Annual International Meeting 6-10 June 2011 Varna, Bulgaria, http://win-bulgaria.org/en/wp-content/uploads/2011/06/CrossSectionLibraries_GTodrova.pdf
7. N. Petrov, G. Todorova, N. Kolev, F. Damian.Two-level MOC calculation scheme in APOLLO2 for Cross-Section Library Generation for LWR Hexagonal Assemblies; International Conference on Mathematics and Computational Methods Applied to Nuclear Science and Engineering (M&C 2011), RJ, Brazil, May 8-12, 2011, on CD-ROM, Latin American Section (LAS) / American Nuclear Society (ANS) ISBN 978-85-63688-00-2
8. G.Todorova, N.Petrov, N.Zheleva, N.p.Kolev, J.Herrero , Advanced Calculation Schemes and Cross-Section Library Generation in Hexagonal Geometry with APOLLO2. Proc. 21th AER Conf. on VVER reactor physics and safety, Dresden, Sept. 19-23, 2011, pp 163-177
9. N.Kolev, N.Petrov, G.Todorova,C.Magnaud, F.Damian, P.Bellier, Development of Calculation Schemes and Generation of XS Libraries with APOLLO2 at the Nodal level for CRONOS2 and DYN3D Diffusion and SP3 Analyses of PWR and VVER . D1.3.1. NURISP document www.nuresim.org/sp1 (2011)
10. G.Todorova, N.Petrov, N.Zheleva, P.Ivanov, N.Kolev,J.Herrero, VVER Benchmarking Using APOLLO2 and TRIPOLI4 and COBAYA3 Pin-by-Pin. NURISP SP1 Meeting, Karsruhe, September 19-20th, 2011, CEA Publ. Database www.cea.fr/serma/
11. G.Todorova, N. Kolev, N.Petrov, N.Zheleva, MOC Based Calculation Schemes in APOLLO2 for Generation of Cross-Section Llibraries for VVER, BgNS International Conference “Nuclear Power fot the People”, 8–11 Nov. 2011, Bansko, Bulgaria, http://www.bgns.bg/web/pub/bgns/A2_MOC_Todorova.pdf
12. N. Zheleva, J.J.Herrero, G.Todorova, P.Ivanov, N.Kolev, Benchmarking Of Cobaya3 Pin-By-Pin For VVER, 22nd Symposium of AER on VVER Reactor Physics and Reactor Safety,
13. Pruhonice, Czech Republic, October 1-5, 2012
14. N.Petrov N., Todorova G., Kolev N.P., “APOLLO2 and TRIPOLI4 Solutions of the OECD VVER-1000 LEU and MOX Assembly Benchmark”, Annals of Nuclear Energy, vol. 55, pp 93-107, Elsevier, 2013
15. Nonka Zheleva, Plamen Ivanov, Galina Todorova, Nikola Kolev, Jose J. Herrero “Benchmarking of Calculation Schemes in APOLLO2 and COBAYA3 for VVER Latices”, International Conference on Mathematics and Computational Methods Applied to Nuclear Science & Engineering(M&C 2013), Sun Valley, Idaho, USA, May 5-9, 2013, on CD-ROM, American Nuclear Society, LaGrange Park, IL (2013)
16. N.Zheleva, G.Todorova, N.Petrov, I.Spasov, N.Kolev, N. Garcia, S.Sanchez-Servera, “Nodal XS library for VVER parameterized for MSLB”, NURESAFE SP1 Meeting, HZDR, Drezden, 09.07.2013
17. Nonka Zheleva , Plamen Ivanov , Galina Todorova , Nikolay Petrov, Nikola Kolev,

“Generation and Testing of XS Libraries for VVER Using APOLLO2 and TRIPOLI4”, Joint International Conference on Supercomputing in Nuclear Applications and Monte Carlo 2013 (SNA + MC 2013), Paris, France, October 27-31, 2013 (accepted)