

AGENDA

8th International Workshop on Application of Field Programmable Gate Arrays in Nuclear Power Plants

October 13-16, 2015, Shanghai, China

hosted by the State Nuclear Power Automation System Engineering Company (SNPAS),
co-organized with SunPort SA, in cooperation with the International Atomic Energy Agency
(IAEA) and the China Atomic Energy Authority (CAEA)

<i>Day 1 – Tuesday, 13 October 2015</i>		
Time	Event	Speaker
8:00 – 09:00	Registration	
Opening Session		
09:00 – 09:10	Welcome, Introduction & Agenda	Glöckler, Oszvald SunPort SA
09:10 – 09:20	Host Organization Welcome	Li, Qiang SNPAS
09:20 – 09:30	IAEA Welcome	Eiler, János IAEA
09:30 – 09:40	Co-Sponsor Welcome	Tang, Yi CNCs
09:40 – 10:00	Invited Presentation: A Diverse Integrated I&C Solution for NPPs	Qiu, Shaoyang SNPAS
10:00 – 10:50	Coffee & Tea Break – Group Photo	
10:50 – 11:25	Invited Presentation: “Application of Field Programmable Gate Arrays in Instrumentation and Control Systems of NPPs”, a new IAEA publication	Eiler, János IAEA
11:25 – 12:00	Invited Presentation: Regulatory Guidance on the Use of FPGAs in the U.S.	Arndt, Steven U.S. NRC
12:00 – 13:30	Lunch Break	
Technical Session 1		Chair: Eiler, János
13:30 – 14:00	Operation and Maintenance Experience of FPGA-based Applications	Sklyar, Vladimir RPC Radiy
14:00 – 14:30	RAVONSICS-Challenging for Assuring Software Reliability of Nuclear I&C System	Zeng, Hai SNPAS
14:30 – 15:00	Logic Translation Automation for FPGA Applications	Yang, Steve Doosan HF Controls
15:00 – 15:30	Coffee & Tea Break	

15:30 – 16:00	Application of FPGA in Safety I&C System of Nuclear Power Plants	Ma, Gang CNCS
16:00 – 16:30	Simplicity and Application simplicity in FitRel R&D	Zhang, Chunlei CTEC
16:30 – 18:00	Exhibits - Coffee & Tea Break	

<i>Day 2 – Wednesday, 14 October 2015</i>		
Time	Event	Speaker
Technical Session 2		Chair: Wigg, Alexander
09:00 – 09:30	Application of FPGA technology in NicSys8000N platform	Liu, Zhikai CNCS
09:30 – 10:00	A research on design method of using FPGA to implementation safety-critical system in NPPs	Kong, Lingqiu CNCS
10:00 – 10:30	Coffee & Tea Break	
10:30 – 12:00	Panel Discussion 1 on Software Issues Relevant to the FPGA Development Process	Moderator: Wigg, Alexander EdF
12:00 – 13:30	Lunch Break	
Technical Session 3		Chair: Zeng, Hai
13:30 – 14:00	Software Tool Qualification in FPGA-based Safety I&C System	Lin, Shuqian CNCS
14:00 – 14:30	Test technology of FPGA-based safety I&C system of nuclear power plant	Xu, Zhan CNCS
14:30 – 15:00	Establishment and Application of ATE for FPGA-Based Reactor Protection System	Kang, Lihong CNCS
15:00 – 15:30	Coffee & Tea Break	
15:30 – 16:00	The reliability model for the FPGA-based instrument and control system using colored petri net	Ma, Zhanguo College of Nuclear Science and Technology, Harbin Engineering University
16:00 – 16:30	Dynamic Reliability Analysis of Radiation-Induced Failure Modes in FPGAs	McNelles, Phillip Charles, CNSC
16:30 – 18:00	Exhibits - Coffee & Tea Break	

Day 3 – Thursday, 15 October 2015

Time	Event	Speaker
Technical Session 4		Chair: Arndt, Steven
09:00 – 09:30	Licensing and Certification Issues of FPGA-based Platform and Applications	Sklyar, Vladimir RPC Radiy
09:30 – 10:00	Failure Mode and Effects Analysis (FMEA) of FPGA-Based Nuclear Power Plant Safety Systems	McNelles, Phillip Charles, CNSC
10:00 – 10:30	Coffee & Tea Break	
10:30 – 12:00	Panel Discussion 2 on Regulations, Licensing, and Standards of FPGA Applications	Moderator: Arndt, Steven U.S. NRC
12:00 – 13:30	Lunch Break	
Technical Session 5		Chair: Glöckler, Oszvald
13:30 – 14:00	FPGA-based I&C systems – unraveling myths from reality	Wigg, Alexander EdF
14:00 – 15:00	A preliminary study on how to design digital safety I&C system for AP1000	Yoshikawa, Hidekazu College of Nuclear Science and Technology, Harbin Engineering University
15:00 – 15:30	Coffee & Tea Break	
15:30 – 16:00	Chipset Level Cybersecurity Issues	Waedt, Karl AREVA
16:00 – 16:30	Simplification of digital safety systems through the use of distributed logic FPGA-based systems	Pericci, John Lockheed Martin
16:30 – 18:00	Exhibits - Coffee & Tea Break	

Day 4 – Friday, 16 October 2015

Time	Event	
Technical Session 6		
09:00 – 10:30	Panel Discussion 3 on V&V and Testing in the FPGA Development Process	Moderator: Sklyar, Vladimir RPC Radiy
10:30 – 11:00	Coffee & Tea Break	
11:00 – 11:30	Discussion on FPGAs in general; recommendations, and future activities Closing	
11:30 – 13:30	Lunch Break	