

O. Pogosov, O. Derevianko

*Odesa National Polytechnic University, Odesa, Ukraine*

## **NPP Physical Protection and Information Security as Necessary Conditions for Reducing Nuclear and Radiation Accident Risks**

*The paper focuses on the fact that nuclear failures and incidents can lead to radioactive contamination of NPP premises. Nuclear and radiation hazard may be caused by malefactors in technological processes when applying computers or inadequate control in case of insufficient level of information security.*

*The researchers performed analysis of factors for reducing risks of nuclear and radiation accidents at NPPs considering specific conditions related to information security of NPP physical protection systems. The paper considers connection of heterogeneous factors that may increase the risk of NPP accidents, possibilities and ways to improve adequate modelling of security of information with limited access directly related to the functioning of automated set of engineering and technical means for NPP physical protection. Within the overall Hutchinson formalization, it is proposed to include additional functional dependencies on indicators specific for NPPs into analysis algorithms.*

*Keywords: nuclear safety, physical protection of nuclear power plants, nuclear power information security.*