Contribution ID: **306**   Type: **oral**

Modeling Nuclear Proliferation for the Purpose of Warning

Wednesday, 22 October 2014 14:50 (20 minutes)

Can nuclear proliferation risk of a country be calculated? If the answer is yes, future challenges of nuclear proliferation could be better dealt with. Currently estimation of nuclear proliferation risk of a country is made based on human judgments. Signs of nuclear proliferation are derived by experts by collecting and processing massive amount of information. This process is human resource intensive and potentially subject to human biases. Quantitative modeling of state's nuclear proliferation risk can be useful in this process. Such a modeling work can aid human decision, and, if reliable, can serve to provide warning for the international community to take necessary preventive actions. Past efforts have shown the possibility of developing such model. The purpose of this study is to develop quantitative models to estimate proliferation risk of states based on open source information. The work is based on the understanding of determinants of nuclear proliferation for both supply and demand sides. Based on examining how a country specific situation leads to specific scenarios of nuclear proliferation, relevant variables are developed along with the supporting data. Utility of the quantitative model is examined based on historical data.

Country or International Organization

Republic of Korea

Primary authors: KIM, Chul Min (KAIST); PARK, Hyeonseok (KAIST); YIM, Man-Sung (KAIST)

Presenter: KIM, Chul Min (KAIST)

Session Classification: Technology Foresight and Emerging Technologies I