

Hidden Potential of Nuclear Research Centres Collaborations

With the advent of the twenty-first century, science and technology development has been becoming increasingly more global. In order to accomplish large-scale agreements, such as the Comprehensive Nuclear-Test-Ban Treaty, it is important to get various stakeholders involved in the technology development and implementation. These stakeholders include university research groups, national laboratories, governments, and individuals themselves. However, even in such critical fields as nuclear weapons testing deterrence, the network of these stakeholders may have gaps of opportunity for collaboration and impact. This work focuses specifically on collaboration among researchers who are at either universities or national laboratories and work on nuclear weapons test ban monitoring and verification technology. The project uses the Thomson Reuters Incites Database to analyze the recent publication trends in the quantity and quality of co-publications among stakeholders. On the fundamental level, the network analysis provides insights into the central stakeholders and cooperation strength among various parties. On a more advanced level, the work identifies the gaps in collaboration that could lead to new, complementary partnerships, both in the various sub-fields and in between new stakeholders. Finally, by correlating various policy measures with the co-publication activity, we glean further insights on the effectiveness of those measures over time.

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