

BIBLIOGRAPHY

Compiled by the Proliferation Resistance and Physical Protection Working Group (PRPPWG) of the Generation IV International Forum (GIF)

Revision 12, July 2026

www.gen-4.org

DISCLAIMER

This report was prepared by the Proliferation Resistance and Physical Protection Working Group (PRPPWG) of the Generation IV International Forum (GIF). Neither GIF nor any of its members, nor any GIF member's national government agency or employee thereof, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. References herein to any specific commercial product, process or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by GIF or its members, or any agency of a GIF member's national government. The views and opinions of authors expressed therein do not necessarily state or reflect those of GIF or its members, or any agency of a GIF member's national government.

Preface

This bibliographic list compiles publications, including articles of scientific journals and papers presented in proceedings of conferences, symposia and workshops, related to the Proliferation Resistance and Physical Protection (PR&PP) Methodology developed by the Generation IV International Forum (GIF) Proliferation Resistance and Physical Working Group (PRPPWG) and its applications. It is intended as a source of information for interested experts and researchers within and outside the GIF community. This bibliographic list is regularly updated by the PRPPWG members and the present edition is the 12th revision of it.

Sections 1 to 3 are devoted to reports, articles and papers on the PR&PP Methodology and on its applications.

Section 4 deals with articles and papers authored by PRPPWG members and/or non-members on topics related to the PR&PP Methodology.

Relevant IAEA and IAEA-INPRO documents making reference to the PR&PP Methodology or dealing with related topics are listed in Appendix A.

For the purpose of the present document “members of the PRPPWG” is defined as colleagues who are or were members or observers in the Group or contributed to its work on an ad hoc basis, and therefore, co-signed some of its outcomes.

In each section/subsection papers are presented by member country/organization in alphabetical order and, for each country/organization, chronologically.

Only references of openly available written reports, articles and papers are included; oral presentations are not considered.

All PRPPWG Reports can be found on the GIF public website by following this [link](#).

Table of Contents

Section 1. Official GIF PRPPWG reports and deliverables (and their translation in non-English language).....	1 -
Section 2. Official/collective GIF PRPPWG articles and papers on the PR&PP Methodology and its applications.....	3 -
Section 3. Papers and articles authored by GIF PRPPWG members (from one institution) and non-members on the PR&PP Methodology and its applications.....	9 -
Section 4. Papers and articles authored by individual PRPPWG members and non-members on PR & PP related topics	15 -
Appendix A: Selected IAEA and IAEA-INPRO publications.....	35 -

(This page has been intentionally left blank)

1. Official GIF PRPPWG reports and deliverables (and their translation in non-English language)

1.1 Official reports

- GIF PRPPWG, "PR&PP Evaluation: ESFR Full System Case Study Final Report", 2009, GIF/PRPPWG/2009/002. <https://www.gen-4.org/resources/reports/prpp-evaluation-esfr-full-system-case-study-proliferation-resistance-and-physical>
- GIF PRPPWG, "Evaluation Methodology for Proliferation Resistance and Physical Protection of Generation IV Nuclear Energy Systems", 2007, GIF/PRPPWG/2006/005-A. <https://www.gen-4.org/resources/reports/evaluation-methodology-proliferation-resistance-and-physical-protection>
- GIF PRPPWG, "Evaluation Methodology for Proliferation Resistance and Physical Protection of Generation IV Nuclear Energy Systems", 2011, GIF/PRPPWG/2011/003. https://www.gen-4.org/gif/jcms/c_40413/evaluation-methodology-for-proliferation-resistance-and-physical-protection-of-generation-iv-nuclear-energy-systems-rev-6
- GIF PRPPWG and SSCs, "GIF Proliferation Resistance and Physical Protection of the Six Generation IV Nuclear Energy Systems", 2011, GIF/PRPPWG/2011/002. <https://www.gen-4.org/resources/reports/proliferation-resistance-and-physical-protection-6-gen-iv-nuclear-energy-systems>
- GIF PRPPWG, "Frequently Asked Questions on Proliferation Resistance and Physical Protection", 2013, GIF/PRPPWG/2013/002. <https://www.gen-4.org/resources/presentations/faq-proliferation-resistance-and-physical-protection>
- GIF PRPPWG, "Workshop on the Proliferation Resistance and Physical Protection Evaluation (PR&PP) Methodology for Generation IV Nuclear Energy Systems", 2015 https://www.gen-4.org/gif/upload/docs/application/pdf/2015-11/prppwg_nov_2015_2015-11-20_14-39-49_203.pdf
- GIF PRPPWG, "Workshop on the Proliferation Resistance and Physical Protection Evaluation (PR&PP) Methodology for Generation IV Nuclear Energy Systems", 2016
- GIF PRPPWG, "Bibliography (Rev. 10)", 2023 <https://www.gen-4.org/resources/reports/proliferation-resistance-and-physical-protection-prpp-bibliography-revision-10>
- GIF PRPPWG and LFR pSSC, "GIF Lead-Cooled Fast Reactor Proliferation Resistance and Physical Protection White Paper", 2021, GIF/PRPPWG/2021/002. <https://www.gen-4.org/resources/reports/lead-fast-reactors-proliferation-resistance-and-physical-protection-white-paper>
- GIF PRPPWG and SFR SSC, "GIF Sodium-Cooled Fast Reactor Proliferation Resistance and Physical Protection White Paper", 2021, GIF/PRPPWG/2021/003. <https://www.gen-4.org/resources/reports/sodium-fast-reactors-proliferation-resistance-and-physical-protection-white-paper>

- GIF PRPPWG and SCWR SSC, “GIF Supercritical Water-Cooled Reactor Proliferation Resistance and Physical Protection White Paper”, 2022, GIF/PRPPWG/2022/002. <https://www.gen-4.org/resources/reports/super-critical-water-reactors-proliferation-resistance-and-physical-protection>
- GIF PRPPWG and GFR SSC, “GIF Gas-Cooled Fast Reactor Proliferation Resistance and Physical Protection White Paper”, 2022, GIF/PRPPWG/2022/003. <https://www.gen-4.org/resources/reports/gas-fast-reactors-proliferation-resistance-and-physical-protection-white-paper>
- GIF PRPPWG and VHTR SSC, “Very-High-Temperature Reactor Proliferation Resistance and Physical Protection White Paper”, 2022, GIF/PRPPWG/2022/005. <https://www.gen-4.org/resources/reports/very-high-temperature-reactors-proliferation-resistance-and-physical-protection>
- GIF PRPPWG, “Proliferation Resistance and Physical Protection Crosscutting topics”, 2022, GIF/PRPPWG/2022/004. <https://www.gen-4.org/resources/reports/proliferation-resistance-and-physical-protection-gen-iv-nuclear-systems>
- GIF PRPPWG and MSR pSSC, “GIF Molten Salt Reactor Proliferation Resistance and Physical Protection White Paper”, 2023, GIF/PRPPWG/2023/001. <https://www.gen-4.org/resources/reports/molten-salt-reactors-proliferation-resistance-and-physical-protection-white-paper>
- GIF PRPPWG, “Bibliography (Rev. 11)”, 2024, GIF/PRPPWG/2024/001. <https://www.gen-4.org/resources/reports/proliferation-resistance-and-physical-protection-prpp-bibliography-revision-11>
- GIF PRPPWG, “Generation IV Proliferation Resistance and Physical Protection Siting Study for AMRs and Microreactors”, 2025, GIF/PRPPWG/2025/001. <https://www.gen-4.org/resources/reports/proliferation-resistance-and-physical-protection-siting-study-advanced-modular>
- GIF PRPPWG, VHTR SSC and RSWG: GIF 3S Group, “Generation IV International Forum Case Study of Safety, Security and Safeguards (3S) Interfaces for a Very High Temperature Reactor System”, 2025, GIF/PRPPWG/2025/002. <https://www.gen-4.org/resources/reports/case-study-safety-security-and-safeguards-3s-interfaces-very-high-temperature>

1.2 Translations in non-English languages

- Kawakubo, Y., Inoue, N., Senzaki, M., “Introduction to the Revision 5 of Evaluation Methodology for Proliferation Resistance and Physical Protection of Generation IV Nuclear Energy Systems (Tentative Japanese Translation)”, 2011, JAEA-Review 2011-024. <https://jopss.jaea.go.jp/pdfdata/JAEA-Review-2011-024.pdf>
- Sagara, H., Kawakubo, Y., Inoue, N., “PR&PP evaluation; ESFR full system case study final report (Tentative Japanese Translation)”, 2014, JAEA-Review 2013-011. <https://jopss.jaea.go.jp/pdfdata/JAEA-Review-2013-011.pdf>
- Kim, H.D., Ahn, S.K., Jeong, J.S., “Evaluation Methodology for Proliferation Resistance and Physical Protection of Generation IV Nuclear Energy Systems (Korean Translation)”, 2018, KAERI/TS-333/2018.

2. Official/collective GIF PRPPWG articles and papers on the PR&PP Methodology and its applications

2003

Roglans-Ribas, J., Bari, R.A., and Peterson, P.F., “Development of an Assessment Methodology for Proliferation Resistance of Generation IV Systems”, International Workshop on Methodologies for Quantitative Assessment of Nuclear Fuel Cycle Technological Proliferation Resistance, Obninsk, Russia, June 3-5, 2003.

Peterson, P.F., Bari, R.A. and Roglans-Ribas, J., “Assessment Methodology Development for Proliferation Resistance and Physical Protection of Generation IV Systems”, Global 2003, New Orleans, LA, USA, November 16-20, 2003. <https://www.semanticscholar.org/paper/Assessment-methodology-development-for-resistance-Roglans-Peterson/01a670a6d2402660bf3da6a1c60538ca4c22e002>

2004

Roglans-Ribas, J., Bari, R.A., Peterson, P.F., Nishimura, R. and Mladineo, S., “A Proliferation Resistance and Physical Protection Assessment Methodology for Use at the Nuclear System Design Stage”, Seventh International Conference on Facility Operations-Safeguards Interface, American Nuclear Society, February 29 - March 5, 2004.

Bley, D., Bari, R.A., Peterson, P.F., and Roglans-Ribas, J., “Defense in Depth and Risk Management Approach to Proliferation Resistance and Physical Protection of Generation IV Nuclear Energy Systems”, Seventh International Conference on Probabilistic Safety Assessment and Management, Berlin, Germany, June 14-18, 2004.

2005

PRPPWG members and other contributors, “Evaluation Methodology for Proliferation Resistance and Physical Protection of Generation IV Nuclear Energy Systems”, 27th ESARDA Annual Meeting Symposium on Safeguards and Nuclear Material Management, IEE Savoy Place, London, United Kingdom, May 10-12, 2005.

Bari, R. A., Peterson, P.F., Nishimura, R., and Roglans-Ribas, J., “Methodology for Proliferation Resistance and Physical Protection of Generation IV Nuclear Energy Systems”, Global 2005, Tsukuba, Japan, October 9-13, 2005.

2006

Bari, R.A., Nishimura, R., Peterson, P.F., Roglans-Ribas, J., Bjornard, T., Cazalet, J., Cojazzi, G.G.M., Delaune, P., Golay, M., Haas, E., Rochau, G., Renda, G., Senzaki M., Therios, I.U., and Zentner, M.D., “Evaluation Methodology for Proliferation Resistance and Physical protection of Generation IV Nuclear Energy Systems: an Overview”, 8th International Conference On Probabilistic Safety Assessment and Management (PSAM 8), New Orleans, LA, USA, May 14-19, 2006. <https://inldigitallibrary.inl.gov/sites/sti/sti/3404923.pdf>

PRPP Exec. Group members and other contributors, “Evaluation Methodology for Proliferation Resistance and Physical Protection of Generation IV Nuclear Energy Systems”, ESReDA 29th Seminar, DG Joint Research Centre, Printed in Italy, October 25-26, 2005.

2007

Cojazzi, G.G.M., Renda, G., Sevini, F., Bari, R.A., Peterson, P.F., Nishimura, R., Therios, I.U., and Bertel, E., "GIF Evaluation Methodology for Proliferation Resistance and Physical Protection of Generation IV Nuclear Energy Systems: Overview and Perspectives", The 29th Annual Meeting; Symposium on Safeguards and Nuclear Material Management, L.V. Bril, A. De Luca, Editors. , Luxembourg , 2007.

2008

Pomeroy, G., Bari, R.A., Wonder, E.F., and Zentner, M.D., "Approaches to Evaluation of Proliferation Resistance of Nuclear Energy Systems", INMM 49th Annual Meeting, Nashville, TN, USA, July 13-17, 2008. <https://resources.inmm.org/annual-meeting-proceedings/approaches-evaluation-proliferation-resistance-nuclear-energy-systems>

Bari, R.A., "Generation IV Proliferation Resistance and Physical Protection Methods and Applications", 16th Pacific Basin Nuclear Conference, Aomori, Japan, October 13-18, 2008.

Cojazzi, G.G.M., Renda, G., Sevini, F., Bari, R.A., Peterson, P.F., Nishimura, R., Therios, I.U., and Bertel, E., "GIF Evaluation Methodology for Proliferation Resistance and Physical Protection of Generation IV Nuclear Energy Systems: Overview and Perspectives", 2008.

Cojazzi, G.G.M., Renda, G., and Choi, J., "Applying the GIF PRPP Methodology for a Qualitative Analysis of a Misuse Scenario in a Notional Gen IV Example Sodium Fast Reactor", INMM 49th Annual Meeting, Nashville, TN, USA, July 13-17, 2008. <https://resources.inmm.org/annual-meeting-proceedings/applying-gif-prpp-methodology-qualitative-analysis-misuse-scenario>

Pomeroy, G., Bari, R.A., Wonder, E.F., Zentner, M.D., Haas, E., Killeen, T., Cojazzi, G.G.M., and Whitlock, J.J., "Approaches to Evaluation of Proliferation Resistance of Nuclear Energy Systems", INMM 49th Annual Meeting, Nashville, TN, USA, July 13-17, 2008. <https://resources.inmm.org/annual-meeting-proceedings/approaches-evaluation-proliferation-resistance-nuclear-energy-systems>

2009

Zentner, M.D., Pomeroy, G., Bari, R.A., Cojazzi, G.G.M., Haas E., Killeen T, Peterson, P.F., Whitlock, J.J., and Wonder, E.F., "Interpretation and Use of the Results of Proliferation Resistance Studies", INMM 50th Annual Meeting, Atlanta, GA, USA, July 12-16, 2009. <https://resources.inmm.org/annual-meeting-proceedings/interpretation-and-use-results-proliferation-resistance-studies>

Bari, R.A., "Proliferation Resistance and Physical Protection (PR&PP) Evaluation Methodology: Objectives, Accomplishments, and Future Directions", Global 2009, Paris, France, September 6-11, 2009.

Boyer, B., "Implications for Advanced Safeguards Derived from PR&PP Case Study Results", Global 2009, Paris, France, September 6-11, 2009.

Cojazzi, G.G.M., Hassberger, J., and Renda, G., "Applying the PR and PP Methodology for a Qualitative Assessment of A Misuse Scenario in a Notional Generation IV Example Sodium Fast Reactor. Assessing Design Variations", Global 2009, Paris, France, September 6-11, 2009.

Khalil, H., Peterson, P.F., Bari, R.A., Fiorini, G-L., Leahy, T., and Versluis, R., "Integration of Safety and Reliability with Proliferation Resistance and Physical Protection for Generation IV Nuclear Energy Systems", Global 2009, Paris, France, September 6-11, 2009.

Zentner, M.D., Pomeroy, G., Bari, R.A., Cojazzi, G.M.G., Haas, E., Killeen, T., Peterson, P.F., Whitlock, J.J., and Wonder, E.F., "Interpretation and Use of the Results of Proliferation Resistance Studies", Global 2009, Paris, France, September 6-11, 2009.

Bari, R.A., Peterson, P.F., Therios, I.U., and Whitlock, J.J., "Proliferation Resistance and Physical Protection Evaluation Methodology Development and Applications", Generation IV International Forum Symposium, Paris, France, September 9-10, 2009.

2010

Cojazzi, G.G.M., Bari, R.A., Bertel, E., Peterson, P.F., Sevini, F., Therios, I.U., Whitlock, J.J., and Zentner, M.D., "The GIF Proliferation Resistance and Physical Protection (PR&PP) Evaluation Methodology: Overview and Perspectives", ENC 2010, Barcelona, Spain, May 30-June 2, 2010.
<https://publications.jrc.ec.europa.eu/repository/handle/JRC58624>

2012

Bari, R.A., "Proliferation Resistance and Physical Protection (PR&PP) Evaluation Methodology: Objectives, Accomplishments", Nuclear Technology, vol. 179, pp. 35-44, July, 2012.

Boyer, B., Erpenbeck, H., and Scherer, C., "Implications for Advanced Safeguards Derived from a Proliferation Resistance and Physical Protection Case Study for a Generation IV Nuclear Energy System", Nuclear Technology, vol. 179, pp. 61-69, July, 2012.
<https://laro.lanl.gov/esploro/outputs/journalArticle/IMPLICATIONS-FOR-ADVANCED-SAFEGUARDS-DERIVED-FROM/9916364826603761>

Cojazzi, G.G.M., Renda, G., Choi, J., and Hassberger, J., "Applying the GIF-PR&PP methodology for a qualitative analysis of a misuse scenario in a notional Generation IV Example Sodium Fast Reactor", Nuclear Technology, vol. 179, pp. 76-90, July, 2012.
https://www.researchgate.net/publication/282360528_Applying_the_GIF_PRPP_Methodology_for_a_Qualitative_Analysis_of_a_Misuse_Scenario_in_a_Notional_Generation_IV_Example_Sodium_Fast_Reactor

Khalil, H., Peterson, P.F., Bari, R.A., Fiorini, G-L., Leahy, T., and Versluis, R., "Integration of Safety and Reliability with Proliferation Resistance and Physical Protection for Generation IV Nuclear Energy Systems", Nuclear Technology, vol. 179, pp.112-116, July, 2012.
<https://www.tandfonline.com/doi/abs/10.13182/NT12-A14072>

Whitlock, J.J., Inoue, N., Senzaki, M., Bley, D., and Wonder, E.F., "Proliferation Resistance of a Hypothetical Sodium Fast Reactor under an Assumed Breakout Scenario", Nuclear Technology, vol. 179, pp. 91-96, July, 2012. <https://www.tandfonline.com/doi/abs/10.13182/NT179-91>

Zentner, M.D., Pomeroy, G., Bari, R.A., Cojazzi, G., Haas, E., Killeen, T., Peterson, P., Whitlock, J.J., and Wonder, E.F., "Interpretation and Use of the Results of Proliferation Resistance Studies", Nuclear Technology, vol. 179, pp. 106-111, July, 2012.
<https://www.tandfonline.com/doi/abs/10.13182/NT12-A14071>

Bari, R.A., Whitlock, J.J., Therios, I.U., and Peterson, P.F., "Proliferation Resistance and Physical Protection Working Group: Methodology and Applications", GIF Symposium, San Diego, CA, USA, November 14-15, 2012. https://inis.iaea.org/search/search.aspx?orig_q=RN:44067350

2014

Whitlock, J.J., Bari, R.A., Peterson, P.F., Therios, I.U., Cojazzi, G.G.M., Bertel, E., Hori, K., Padoani, F., Renda, G., Sprinkle, J., Haas, E., Cazalet, J., Kawakubo, Y., Kim, H.D., Kwon, E.H., Yoo, H.S., Chang, S.Y., Chebeskov, A., Pshakin, G., Pilat, J., and Moses, D., "Status of the Gen-IV Proliferation Resistance and Physical Protection (PRPP) Evaluation Methodology", IAEA: Symposium on International Safeguards: Linking Strategy, Implementation and People, Vienna (Austria): IAEA, 2014. <https://publications.jrc.ec.europa.eu/repository/handle/JRC90464>

2015

Hori, K., "Proliferation Resistance and Physical Protection (PR&PP) Working Group Activities, "Proliferation Resistance and Physical Protection (PR&PP) Working Group Activities", Session I-2 2015 GIF Symposium, Chiba, Japan, Chiba, Japan, 42143. https://www.gen-4.org/gif/upload/docs/application/pdf/2015-06/1-2-1_hori_prppwg_gif_symposium_may_2015_draft_v32.pdf

Cazalet, J., Bari, R., Peterson P., Whitlock J., Therios I., Cojazzi G, Renda G., "Status of the Generation IV Proliferation Resistance and Physical Protection (PR&PP) Evaluation Methodology", GLOBAL 2015 21st International Conference and Exhibition: 'Nuclear Fuel Cycle for a Low-Carbon Future', SFEN; 2015. p. 5460, 2015.

2016

Cojazzi G.G.M., Renda G., Bari R.A., Whitlock J., Peterson P.F., Therios, I.U., and Cazalet J., "The GIF Proliferation Resistance and Physical Protection (PR&PP) Evaluation Methodology: Status and Outlook", ANS Advances in Nuclear Nonproliferation Technology and Policy Conference: Bridging the Gaps in Nuclear Nonproliferation, Santa Fe, NM, USA, September 25-30, 2016. <https://publications.jrc.ec.europa.eu/repository/handle/JRC101413>

2017

Chebeskov A., Cojazzi G.G.M., Bari R., Whitlock J., Peterson P., Cazalet J., Kwon E., and Hori K., "The GIF Proliferation Resistance and Physical Protection (PR&PP) Evaluation Methodology: Status, Applications and Outlook", International Conference on Fast Reactors and Related Fuel Cycles: Next Generation Nuclear Systems for Sustainable Development (FR17), Yekaterinburg, Russian Federation, June 26-29, 2017. <https://publications.jrc.ec.europa.eu/repository/handle/JRC105857>

2018

Bari, R., "GIF ETWG Series, Webinar #20: Proliferation Resistance and Physical Protection of Gen IV Reactor Systems", 43243. <https://www.gen-4.org/resources/webinars/education-and-training-series-20-proliferation-resistance-and-physical>

Cojazzi, G.G.M, Renda, G., Cheng, L., Peterson, P., Bari, R., Boyer, B., Chebeskov, A., Edwards, G., Henderson, D., Hervieu, E., Hori, K., Kim, D. and Padoani, F., "The GIF Proliferation Resistance and Physical Protection working group (PRPPWG): achievements and perspectives", Atoms for the Future 2018 and GIF Symposium, UIC Paris, October 16-17, 2018. <https://www.osti.gov/servlets/purl/1489749>

Cojazzi, G., Renda, G., Cheng, L., Peterson, P., Bari, R., Henderson, D., Boyer, B., Chebeskov, A., Choe, K., Cipiti, B., Edwards, G., Hervieu, E., Hori, K., Kim, H. and Padoani, F., "The GIF Proliferation Resistance and Physical Protection methodology applied to GEN IV system designs: some reflections", IAEA Safeguards Symposium 2018, IAEA, Vienna, November 5-9, 2018. <https://www.osti.gov/servlets/purl/1489750>

2019

Cheng, L., Cojazzi, G., Renda, G., Cipiti, B., Boyer, B., Edwards, G., Hervieu, E., Hori, K., Peterson, P. and Kim, H., "The GIF Proliferation Resistance and Physical Protection methodology applied to GEN IV system designs: an update", ESARDA'19: ESARDA Symposium 2019 - 41st Annual Meeting, Regina Palace Hotel, Corso Umberto I, 29, Stresa (VB), Italy, May 14-16, 2019. <https://www.osti.gov/servlets/purl/1513227>

Cipiti, B., Cojazzi, G., Cheng, L., and Renda, G., "An Update of the GIF Proliferation Resistance and Physical Protection White Papers for the Six Gen IV Systems", 9th INMM/ESARDA/INMMJ Joint Workshop, Plaza HEISEI, Tokyo, Japan, October 7-10, 2019.

2021

Cheng, L., Cojazzi, G., Renda, G., Cipiti, B., Boyer, B., Edwards, G., Hervieu, E., Hori, K., Kim, H., Tomooki, S. and Van Der Ende, B., "White Papers on Proliferation Resistance and Physical Protection Characteristics of the Six GEN IV Nuclear Energy Systems", INMM and ESARDA 2021 Joint Annual Meeting, Online, August 21-26, 2021. <https://resources.inmm.org/annual-meeting-proceedings/white-papers-proliferation-resistance-and-physical-protection>

2022

Cipiti, B.B., Cheng, L.Y., Renda, G., Cojazzi, G.G.M., Boyer, B., van der Ende, B., Edwards, G., Hesketh, K., Nguyen, F., Hervieu, E., Hori, K., Shiba, T., "Proliferation Resistance and Physical Protection White Papers of the six Generation IV E. Nuclear Energy Systems and Crosscutting Topics: 2021-2022 Update", IAEA Safeguards Symposium, IAEA, Vienna, November, 2022. <https://www.osti.gov/servlets/purl/2005229>

2023

Cipiti, B.B., Cheng, L.Y., Boyer, B., van der Ende, B., "Generation IV Proliferation Resistance and Physical Protection: Transitioning from R&D to Deployment", INMM and ESARDA Joint Annual Meeting, IAEA, Vienna, Austria, May, 2023.

2024

Cipiti, B.B., Cheng, L.Y., Renda, G., Cojazzi, G.G.M., Nava, E., van der Ende, B., Navarro, J., Sherer, C., "Proliferation Resistance and Physical Protection in an Era of Expansion of Small Modular Reactors", INMM Annual Meeting, Portland, Oregon, USA, July 21-25, 2024. <https://resources.inmm.org/annual-meeting-proceedings/proliferation-resistance-and-physical-protection-era-expansion-small>

Nguyen, F., Ahn, S.-K., Boyer, B., Cheng, L.-Y., Cipiti, B., Cojazzi, G.G.M., van der Ende, B., Hesketh, K., Iyengar, A., Jeong, S., Nava, E., Navarro, J., Renda, G., Scherer, C.P., Scott, L., Shiba T., "GIF Proliferation Resistance and Physical Protection (PR&PP) Working Group Activities on Generation IV Nuclear Energy Systems", GLOBAL 2024, Tokyo, Japan, October 6-10, 2024.

Renda, G., Ammirabile, L., Cheng, L., Chaasz, C., Cipiti, B., Cojazzi, G.G.M., Hummel, D., Stewart, R., van der Ende, B., "Safety, Security and Safeguards (3S) Interface Identification and Characterisation in Generation IV Advanced Modular Reactors, A Generation IV International Forum Case Study", IAEA International Conference on Small Modular Reactors and their Applications, Vienna, Austria, October 21-25, 2024.

2025

van der Ende, B.M., Cipiti, B. B., Nguyen, F., Renda, G., "PR&PP Evaluation Methodology in Support of PR&PP by Design for Fast Reactors and Associated Fuel Cycles", IAEA Technical Meeting on Proliferation Resistance of Fast Reactors and Associated Fuel Cycles, Vienna, Austria, August 18-22, 2025.

Nguyen, F., Cipiti, B. B., Renda, G., Van der Ende, B.M., Cojazzi, G.G.M., "Proliferation Resistance And Physical Protection Crosscutting Topics Application to GIF GEN IV Energy Systems and to Siting Study for AMRs and Microreactors", IAEA Technical Meeting on Proliferation Resistance of Fast Reactors and Associated Fuel Cycles, Vienna, Austria, August 18-22, 2025.

van der Ende, B. M., Ammirabile, L., Cheng, L. Y., Chwasz, C., Cipiti, B. B., Cojazzi, G. G. M., Hummel, D., Renda, G., Stewart, R., Strydom, G., "A Case Study of 3S Interfaces in a Generation IV Advanced Modular Reactor", 66th INMM Annual Meeting, Washington DC, USA, August 24-28, 2025.

van der Ende, "GIF ETWG Series - Webinar #104: Safety-Security-Safeguards (3S) Interface Case Study by GIF PRPPWG ", Online, September 24, 2025. <https://www.gen-4.org/resources/webinars/education-and-training-series-104-safety-security-safeguards-3s-interface-case>

3. Papers and articles authored by GIF PRPPWG members (from one institution) and non-members on the PR&PP Methodology and its applications

Canada

2010

Whitlock, J.J., "Incorporating the GIF-PRPP Proliferation Resistance Methodology in Reactor Design", INMM 51st Annual Meeting, Baltimore, MD, USA, July 11-15, 2010.
<https://resources.inmm.org/annual-meeting-proceedings/incorporating-gif-prpp-proliferation-resistance-methodology-reactor>

Euratom

2012

Alim, F., Cojazzi, G.G.M., and Renda, G., "Proliferation Resistance Considerations of the Collaborative Project on the European Sodium Fast Reactor (CP-ESFR)", ITU-INE Research Fellows` Day, Fortbildungszentrum für Technik und Umwelt (FTU), Karlsruhe, Germany, 41082.

Alim, F., Cojazzi, G.G.M., and Renda, G., "The Collaborative Project on the European Sodium Fast Reactor and its Proliferation Resistance Evaluation", ENC, European Nuclear Conference. Vol. Transactions Civil Society. Brussels (Belgium): ENS; 2012. p. ENC2012-A0249. JRC71856., Manchester, United Kingdom, December 9-12, 2012.
<https://publications.jrc.ec.europa.eu/repository/handle/JRC71856>

2013

Alim, F., Cojazzi, G.G.M., and Renda, G., "Proliferation Resistance Considerations within the Collaborative Project for a European Sodium Fast Reactor", 35th ESARDA Annual Meeting, European Commission, Joint Research Centre, ITU; 2013. JRC79455., Ispra, Italy, May 27-30, 2013.

2014

Renda, G., Cojazzi, G.G.M., and Alim, F., "Proliferation Resistance and Material type considerations within the collaborative project for a European Sodium Fast Reactor", Publications Office of the European Union; 2014. , European Commission Joint Research Centre, EUR 26996, Luxembourg, 2014. <https://op.europa.eu/en/publication-detail/-/publication/fbc7e85c-9f5f-4a03-8797-770e29181a10/language-en>

2015

Renda, G., Alim, F., and Cojazzi G.G.M., "Proliferation Resistance and Material Type Considerations within the collaborative project for a European Sodium Fast Reactor", ESARDA Bulletin Publications Office of the European Union; p. 124-143, Luxembourg, 2015.
https://www.researchgate.net/publication/282358266_Proliferation_Resistance_and_Material_type_considerations_within_the_collaborative_project_for_a_European_Sodium_Fast_Reactor

France

2009

Carré, F., and Felix, S., "Proliferation Resistance and Physical Protection in the Generation IV International Forum System Design Concepts", Global 2009, Paris, France, September 6-11, 2009.

2020

Allibert, M., Merle, E., Delpech, S., Gerardin, D., Heuer, D., Laureau, A., and Moreau, S., "Preliminary proliferation study of the molten salt fast reactor", EPJ Nuclear Sci. Technol., vol. 6, 5, 2020. https://www.epj-n.org/articles/epjn/full_html/2020/01/epjn190009/epjn190009.html

Japan

2008

Kuno, Y., Inoue, N., and Senzaki, M., "Nuclear proliferation-resistance and safeguards for future nuclear fuel cycle", Journal of nuclear Materials, 385-1, pp.153-156, July, 2008.
<https://www.sciencedirect.com/science/article/pii/S0022311508006314>

Senzaki, M., Inoue, N., and Kuno, Y., "The Japanese PR&PP program", 16th Pacific Basin Nuclear Conference (PBNC-16), Aomori, Japan, October 13-18, 2008.

2009

Kuno, Y., Inoue, N., and Senzaki, M., "Advanced safeguards and proliferation resistance of the future nuclear fuel cycle systems", INMM 50th Annual Meeting, Tucson, AZ, USA, July 12-16, 2009. <https://resources.inmm.org/annual-meeting-proceedings/advanced-safeguards-and-proliferation-resistance-future-nuclear-fuel>

Senzaki, M., Inoue, N., Kuno, Y., and Namba, T., "Nuclear Nonproliferation Technology Development Program for Future Nuclear Energy Systems in Japan", Global 2009, Paris, France, September 6-11, 2009.

Kuno, Y., Senzaki, M., and Inoue, N., "Role of safeguards in proliferation resistance for the future nuclear fuel cycle systems", International Conference on Fast Reactors and Related Fuel Cycles (FR 2009), Kyoto, Japan, December 7-11, 2009.
<https://inis.iaea.org/collection/NCLCollectionStore/Public/41/070/41070083.pdf>

2010

Inoue, N., and Kuno, Y., "Safeguards System of Advanced Aqueous Reprocessing for Nuclear Proliferation Resistance Enhancement", Transactions of the Atomic Energy Society of Japan, vol. 9, No. 3, pp. 305-317 (In Japanese), 2010. <https://www.osti.gov/etdeweb/biblio/21417110>

Inoue, N., Kaji, N., Suda, K., Kawakubo, Y., Suzuki, M., Koyama, T., Kuno, Y., and Senzaki, M., "A Consideration on proliferation resistance of a FBR fuel cycle system", INMM 51st Annual Meeting, Baltimore, MD, USA, July 11-15, 2010. <https://resources.inmm.org/annual-meeting-proceedings/consideration-proliferation-resistance-fbr-fuel-cycle-system>

Inoue, N., Kawakubo, Y., Seya, M., Suzuki, M., Kuno, Y., and Senzaki, M., "The Status of proliferation resistance evaluation methodology development in GEN IV International Forum", 31st INMM Japan Chapter Annual Meeting, Tokai, Japan, December 2-3, 2010. <https://www.osti.gov/etdeweb/biblio/22085437>

2011

Sagara, H., Inoue, N., Kawakubo, Y., and Watahiki, M., "Report and analysis on "PR&PP Evaluation; Example Sodium Fast Reactor Full System Case Study", 32nd INMM Japan Chapter Annual Meeting, Tokyo, Japan, November 10-11, 2011. <https://www.osti.gov/etdeweb/biblio/22070263>

Kuno, Y., Oda, T., Tanaka, S., Fukasawa, T., Tanabe, T., Tamai, H., Horio, K., Hamasaki, M., Shinohara, N., and Ikeda, Y., "Study on effectiveness assessment of proliferation resistance", INMM 52nd Annual Meeting, Palm desert, California, USA, July 17-21, 2011. <https://resources.inmm.org/annual-meeting-proceedings/study-effectiveness-assessment-proliferation-resistance>

Ikegame, K., Kuno, Y., and Tanaka, S., "Evaluation of Proliferation Resistance of Uranium Enrichment Technologies by Using GIF PR&PP Evaluation Method", 32nd Annual Meeting of INMM Japan Chapter (In Japanese), 2011.

Republic of Korea

2010

Kim, H-D., Chang, H-L., and Ko, W-I., "Proliferation Resistance Activities in ROK", INMM 51st Annual Meeting, Baltimore, MD, USA, July 11-15, 2010.

2012

Ahn, S-K., Shin, H-S., and Kim, H-D., "Safeguardability Analysis for an Engineering Scale Pyroprocess Facility", Journal of Nuclear Science and Technology, vol. 49, No. 6, pp. 632-639, June, 2012. <https://www.tandfonline.com/doi/full/10.1080/00223131.2012.686805>

2014

Kim, H-M., Ahn S-K., Kwon, E-H., and Kim, H-D., "Review of GIF PR&PP Evaluation Case Study for Application to Pyroprocessing", Korean Nuclear Society Spring Meeting, Jeju, Korea, May 29-30, 2014. https://www.kns.org/files/pre_paper/31/341%EA%B9%80%ED%98%84%EB%AF%BC.pdf

Ahn, S-K., Kwon, E-H., Chang, H-L., and Kim H-D., "A Proliferation Resistance Evaluation for a Pyroprocessing Facility Design", INMM 55th Annual Meeting, Atlanta, GA, USA, July 19-25, 2014.

2015

Ahn, S-K., Seo C-S., Kwon E-H., and Kim H-D., "Linkage Options between Unit Process to Enhance Proliferation Resistance of Pyroprocessing", Annals of Nuclear Energy, vol.75, pp. 184-188, 2015. <https://www.sciencedirect.com/science/article/abs/pii/S0306454914003867>

United States

2005

Yue, M., Cheng, L., Papazoglou, I.A., Azarm, M.A., and Bari, R.A., "Calculations of Proliferation Resistance for Generation III Nuclear Energy Systems", Global 2005, Tsukuba, Japan, October 9-13, 2005.

<https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=37044267>

Yue, M., Cheng, L., and Bari, R.A., "Markov Methodology for Proliferation Resistance of Nuclear Energy Systems", 29th European Safety, Reliability and Data Association (ESReDA) Seminar: Systems Analysis for a More Secure World, Ispra, Italy, October 25-26, 2005.

2006

Yue, M., Cheng, L., and Bari, R.A., "Methodology for Proliferation Resistance for Advanced Nuclear Energy Systems", International Conference on Probabilistic Safety Assessment and Management (PSAM8), New Orleans, LA, USA, May 14-18, 2006.

<https://asmedigitalcollection.asme.org/ebooks/book/137/chapter-abstract/25185/Methodology-for-Proliferation-Resistance-for?redirectedFrom=fulltext>

2008

Bari, R.A., "Framework for Proliferation Resistance and Physical Protection for Nonproliferation Impact Assessments", BNL-80083-2008, March, 2008.

Yue, M., Cheng, L., and Bari, R.A., "Markov Model Application to Proliferation Risk Reduction of an Advanced Nuclear System", INMM 49th Annual Meeting, Nashville, Nashville, TN, USA, July 13-17, 2008. <https://resources.inmm.org/annual-meeting-proceedings/markov-model-application-proliferation-risk-reduction-advanced-nuclear>

Yue, M., Cheng, L., and Bari, R.A., "Markov Based Approach for Proliferation Resistance Assessment of Nuclear Energy Systems", Nuclear Technology, 162, 88, pp. 26-44, 2008.

2009

Bari, R. A., Cheng, L., Phillips, J., Pilat, J., Rochau, G., Therios, I.U., Wigeland, R., Wonder, E.F., and Zentner, M.D., "Proliferation Risk Reduction Study of Alternative Spent Fuel Processing Technologies", INMM 50th Annual Meeting, Tucson, AZ, USA, July 12-16, 2009.

<https://resources.inmm.org/annual-meeting-proceedings/proliferation-risk-reduction-study-alternative-spent-fuel-processing>

Yue, M., Cheng, L., and Bari, R.A., "Relative Proliferation Risks for Different Fuel Cycle Arrangements", Nuclear Technology, 165, pp. 1-17, 2009.

<https://www.tandfonline.com/doi/abs/10.13182/NT09-A4058>

2010

Zentner, M.D., Therios, I.U., Bari, R.A., Chang, L., Yue, M., Wigeland, R. Hassberger, J., Boyer, B., and Pilat, J., "An Expert Elicitation Based Study of the Proliferation Resistance of a Suite of Nuclear Power Plant", INMM 51st Annual Meeting, Baltimore, MD, USA, July 11-15, 2010.

<https://resources.inmm.org/annual-meeting-proceedings/expert-elicitation-based-study-proliferation-resistance-suite-nuclear>

Bari, R.A., "Proliferation Resistance and Safeguards", Cacuci, D., Springer USA and Springer, DE, ISBN 978-0-387-98130-7, 2010. <https://www.infona.pl/resource/bwmeta1.element.springer-5f0725ac-3861-3498-b475-51830fcb4a50/tab/summary>

2012

Bari, R.A., Johnson, S.J., Hockert, J., Wigeland, R., Wonder, E.F., and Zentner, M.D., "Overview of the Facility Safeguardability Analysis (FSA) Process", PNNL-21698, Pacific Northwest Laboratory, USA, August, 2012. https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-21698.pdf

2013

Yue, M., Cheng, L., and Bari, R.A., "Modeling and Evaluating Proliferation Resistance of Nuclear Energy Systems for Strategy Switching Proliferation", Annals of Nuclear Energy, vol. 54, pp. 11-26, 2013. <https://www.sciencedirect.com/science/article/abs/pii/S0306454912004069>

Glaser, A., Berzak Hopkins, L., and Ramana, M.V., "Resource Requirements and Proliferation Risks Associated with Small Modular Reactors", Nuclear Technology, October, 2013. <https://www.tandfonline.com/doi/abs/10.13182/NT13-A19873>

2016

Cheng, L., Yue, M., and Bari, R.A., "Markov Approach to Evaluate Physical Protection of Nuclear Energy Systems", IAEA International Conference on Nuclear Security: Commitments and Actions, December, 2016. https://www.researchgate.net/publication/311981973_Markov_Approach_to_Evaluate_Physical_Protection_of_Nuclear_Energy_Systems

Pilat, J., "Proliferation Resistance Redux", ANS Advances in Nuclear Nonproliferation Technology and Policy Conference: Bridging the Gaps in Nuclear Nonproliferation, Santa Fe, NM, USA, September 25-30, 2016.

2020

Cheng, L.-Y., and Bari, R.A., "Proliferation Resistance and Physical Protection (PR&PP) in Small Modular Reactors (SMRs)", Handbook of Small Modular Nuclear Reactors, Second Edition, edited by D. Ingersoll and M. Carelli, Woodhead Publishing Limited, An imprint of Elsevier Science and Technology Books, 2020. <https://www.sciencedirect.com/science/article/abs/pii/B9780128239162000096>

D.Ingersoll and M. Carelli, Woodhead, "Handbook of Small Modular Nuclear Reactors", Woodhead Publishing Limited, An imprint of Elsevier Science and Technology Books, 2020. <https://www.sciencedirect.com/book/9780128239162/handbook-of-small-modular-nuclear-reactors>

2014

M. Carelli and D. Ingersoll, "Handbook of Small Modular Nuclear Reactors", Woodhead Publishing Limited, An imprint of Elsevier Science and Technology Books, 2014. <https://www.sciencedirect.com/book/9780857098511/handbook-of-small-modular-nuclear-reactors>

2025

Cipiti, B.B., "Proliferation Resistance Insights for Fast Reactors: A U.S. and International Perspective", IAEA Technical Meeting on Proliferation Resistance of Fast Reactors and Associated Fuel Cycles, Vienna, Austria, August 18-22, 2025.
<https://conferences.iaea.org/event/411/contributions/37036/attachments/20604/34977/Cipiti%20IAEA%20TM%20Presenatation.pdf>

Belgium

2013

Rossa R., van der Meer, K., and Borella, A., "Application of the PR&PP methodology to the MYRRHA research facility", ESARDA Bulletin, 2013.
<https://researchportal.sckcen.be/en/publications/application-of-the-pramppp-methodology-to-the-myrrha-research-fac>

2014

Rossi, F., "Application of the GIF PR&PP Methodology to a Fast Reactor System for a Diversion Scenario", IAEA: Symposium on International Safeguards: Linking Strategy, Implementation and People, Vol. IAEA-CN-20;p. Page 360 - paper n° IAEA CN-220 #271, Vienna, Austria, 2014.
<https://conferences.iaea.org/event/47/contributions/8764/contribution.pdf>

2015

Rossi F., "Application of the GIF PR&PP methodology to a commercial fast reactor system for a preliminary analysis of PR scenarios", ESARDA Bulletin, Luxembourg, 2015

4. Papers and articles authored by individual PRPPWG members and non-members on PR & PP related topics

Canada

2010

Casterton, J.A., Ellacott, T., Kent, M., “Safeguards-by-Design: The Canadian Experience”, IAEA Symposium on Safeguards, Vienna, Austria, November 1-5, 2010.

Whitlock, J.J., “Application Of Safeguards-by-Design to a Reactor Design Process”, IAEA Symposium on Safeguards, Vienna, Austria, November 1-5, 2010.
<https://inis.iaea.org/collection/NCLCollectionStore/Public/42/081/42081452.pdf>

2022

Buijs, R.I.A., Luxat, J., “Assessment of the material attractiveness and reactivity feedback coefficients of various fuel cycles for the Canadian concept of Super-Critical Water Reactors”, Nuclear Engineering and Technology, Volume 54, Issue 7, Pages 2660-2669, July, 2022.
[https://urldefense.com/v3/https://doi.org/10.1016/j.net.2022.01.036;!!DOxrgLBm!GfOH7DVP74LdS1hrWAYLSdQKd_n13lcYghQeIR0t8Ef2k6mmlx5kVJlkH4E3ZOOxM6OQsSDnUSbxvu4uVgO6NOeGTF8e-4S3\\$](https://urldefense.com/v3/https://doi.org/10.1016/j.net.2022.01.036;!!DOxrgLBm!GfOH7DVP74LdS1hrWAYLSdQKd_n13lcYghQeIR0t8Ef2k6mmlx5kVJlkH4E3ZOOxM6OQsSDnUSbxvu4uVgO6NOeGTF8e-4S3$)

People’s Republic of China

2020

Wu, J., Ma, Y., Yu, C., Zou, C., Cai, X., and Chen, J., “Nuclear non-proliferation review and improving, proliferation resistance assessment in the future”, Special Issue Review Paper, International Journal of Energy Research, April 05, 2020.
<https://onlinelibrary.wiley.com/doi/abs/10.1002/er.5486>

Euratom

2003

Cojazzi, G.G.M., and Renda, G., “Applying systems analysis and risk based approaches to assess nuclear safeguards and non-proliferation regimes”, ESARDA Symposium, Stockholm, Sweden, May, 2003. <https://www.osti.gov/etdeweb/biblio/20485066>

2004

Cojazzi, G.G.M., and Renda, G., “Safeguards Assessment Methodologies: Review and Perspectives from a Systems Analysis Point of View”, EUR 21307 EN, September, 2004.

2005

Cojazzi, G.G.M., and Renda, G., "Proliferation Resistance Characteristics for Civilian Nuclear Fuel Cycles Assessments", 27th ESARDA Annual Meeting Symposium on 'Safeguards and Nuclear Material Management', IEE Savoy Place, London, May 10-12, 2005.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC31510>

Cojazzi, G.M.G., Contini, S., and Renda, G., "FT Analysis in Security Related Applications: Challenges and Needs", 29th ESARDA Seminar, Proceedings: A. Lannoy, G.G.M. Cojazzi, editors. Luxembourg (Luxembourg): Office for Official Publications of the European Communities; 2005. pp. 345-366. JRC31835, Luxembourg (Luxembourg), October 25-26, 2005.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC31835>

2007

Cojazzi, G.G.M., Renda, G., and Sevini, F., "Proliferation Resistance Characteristics of Advanced Nuclear Energy Systems: a Safeguardability Point of View", Symposium on Safeguards and Nuclear Material Management, Office for Official Publications of the European Commission; 2007, p. 1-12. JRC37861, Luxembourg (Luxembourg), 2007.

Sevini, F., Cojazzi, G.G.M., and Renda, G., "Proliferation Resistance and Physical Protection Robustness Characteristics of Innovative and Advanced Nuclear Energy Systems", 29th ESARDA Annual Meeting, Office for Official Publications of the European Commission; 2007. pp. 1-16. JRC38146, Luxembourg (Luxembourg), 2007.

2008

Cojazzi, G.G.M., Renda, G., and Sevini, F., "Proliferation Resistance Characteristics of Advanced Nuclear Energy Systems: a Safeguardability Point of View", ESARDA Bulletin - Special Issue on Proliferation Resistance (39), pp. 31-40. JRC47408, 2008.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC47408>

Sevini, F., Cojazzi, G.G.M., and Renda, G., "Proliferation Resistance and Physical Protection Robustness Characteristics of Innovative and Advanced Nuclear Energy Systems", ESARDA Bulletin - Special Issue on Proliferation Resistance (39), pp. 3-20. JRC47483, 2008.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC47483>

Renda, G., "Resisting Nuclear Proliferation Through Design - A Systems Approach to Nuclear Proliferation Resistance Assessment", JRC58146, Bristol (United Kingdom): University of Bristol, 2008.

Contini, S., Cojazzi, G.G.M., and Renda, G., "On the Use of Non-Coherent Fault Trees in Safety and Security Studies", Reliability Engineering and System Safety, pp. 1886-1895. JRC38257, 2008. <https://www.sciencedirect.com/science/article/abs/pii/S0951832008001117>

2009

Renda, G., Contini, S., and Cojazzi, G.G.M., "On the Methods to Model and Analyze Attack Scenarios with Fault Trees", ESREL 2008 Annual Conference, pp. 3135-3142. JRC44427, London (United Kingdom), 2009.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC44427>

2010

van der Meer, K., Turcanu, C., and Carchon, R., "Non-Proliferation Assessment of the XT-ADS MYRRHA", ESARDA Bulletin, No. 44, June, 2010.

https://www.researchgate.net/publication/234116750_Non-Proliferation_Assessment_of_the_XT-ADS_MYRRHA

Hedberg, M., Luetzenkirchen, K., and Mayer, K., "Proliferation Resistance and Safeguards", In: Dan Gabriel Cacuci, editor. Handbook of Nuclear Engineering, pp. 3421-3538, 2010.

<https://www.infona.pl/resource/bwmeta1.element.springer-5f0725ac-3861-3498-b475-51830fcb4a50>

Sevini, F., Peerani, P., Janssens, W., Cojazzi, G. G.M., Boella, M., Koutsoyannopoulos, C., Chare, P., and Killeen, T., "EURATOM's contribution to the IAEA Safeguards by Design process", INMM 51st Annual Meeting, Baltimore, MD, USA, July 11-15, 2010.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC59090>

Sevini, F., Peerani, P., Janssens, W., Boella, M., Koutsoyannopoulos, C., Chare, P., and Killeen, T., "Development of IAEA High Level Guidelines for Designers and Operators - Safeguards-By-Design", IAEA Safeguards Symposium 2010, Vienna, Austria, November 1-5, 2010.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC61998>

Boella, M., Koutsoyannopoulos, C., Chare, P., Killeen, T., Sevini, F., Peerani, P., and Janssens, W., "The Safeguards-by-Design Process for a More Effective and Efficient Safeguards Implementation", ENC 2010, Conference Proceedings: ENC 2010 Transactions - ISBN 978-92-95064-09-6. Brussels (Belgium): European Nuclear Society; 2010, Barcelona, Spain, May 30-June 2, 2010.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC58606>

2011

Starflinger, J., Schulenberg, T., Bittermann, D., Andreani, T., and Maraczy, C., "Assessment of the High Performance Light Water Reactor Concept", The 5th Int. Sym. SCWR (ISSCWR-5), Vancouver, British Columbia, Canada, March 13-16, 2011.

<https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=48068386>

Sevini, F., Renda, G., and Sidlova, V., "A Safeguardability Check-List for Safeguards by Design", 33rd ESARDA Symposium, ISBN 978-92-79-18525-0, Budapest, Hungary, May 16-19, 2011.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC65958>

Sevini, F., Renda, G., and Sidlova, V., "A Safeguardability Check-List for Safeguards by Design", ESARDA Bulletin, vol. 48, pp. 79-88., December, 2011. https://www.researchgate.net/profile/F-Sevini-2/publication/275967104_A_Safeguardability_Check-List_for_Safeguards_by_Design/links/554c8d4d0cf29752ee7ef55b/A-Safeguardability-Check-List-for-Safeguards-by-Design.pdf

2012

Renda, G., Alim, F., Cojazzi, G.G.M., and Peerani, P., "Material type and safeguardability considerations for innovative sodium fast reactors fuel including different minor actinides compositions", INMM 53rd Annual Meeting, JRC72399, Orlando, FL, USA, July 15-19, 2012.

<https://kurumsalarsiv.tenmak.gov.tr/server/api/core/bitstreams/04c8156e-7d28-493f-8a65-c370c008c578/content>

Abousahl, S., Ranguelova, V., Janssens, W., De Cort, M., Waetjen, U., Cojazzi, G.G.M., Marin Ferrer, M., Sequeira, V., Wallenius, M., Mayer, K., and Hedberg, M., “Technical Synergies between Nuclear Safety and Security”, INMM 53rd Annual Meeting, JRC78335, Orlando, FL, USA, July 15-19, 2012. <https://publications.jrc.ec.europa.eu/repository/handle/JRC78335>

Janssens, W., Luetzenkirchen, K., Emons, H., Abousahl, S., Aregbe, Y., Berndt, R., Cojazzi, G.G.M., Hedberg, M., Littmann, F., Mayer, K., Peerani, P., and Sequeira, V., “Recent JRC Achievements and Future Challenges in Verification for Nuclear Safeguards and Nonproliferation”, JNMM, Journal of the Institute of Nuclear Materials Management 40 (4), pp. 11-23, 2012. <https://publications.jrc.ec.europa.eu/repository/handle/JRC83322>

2013

Abbas, K., Cojazzi, G.G.M., Mercurio, G., Peerani, P., and Renda, G., “Proliferation resistance features of reprocessed uranium”, 35th ESARDA symposium on Safeguards and Nuclear Non-Proliferation, Bruges, Belgium, May 27-30, 2013.

Abbas, K., Cojazzi, G.G.M., Mercurio, G., Peerani, P., and Renda, G., “Proliferation resistance features of reprocessed uranium”, ESARDA Bulletin, No. 49, pp. 75-81, June, 2013.

2017

Maiani, L., Abousahl, S., and Plastino, W., “International Cooperation for Enhancing Nuclear Safety, Security, Safeguards and Nonproliferation—60 Years of IAEA and EURATOM”, XX Edoardo Amaldi Conference, Springer Proceedings in Physics 206, 2018, Accademia Nazionale dei Lincei, Rome, Italy, October 9–10, 2017. <https://link.springer.com/book/10.1007/978-3-662-57366-2>

2019

Glinatsis, G., Gugiu, D., and Padoani, F., “Improvement of Proliferation Resistance based on ‘By-Design’ Approach”, Journal of Nuclear Research and Development, No. 17, May, 2019. http://www.jnrd-nuclear.ro/images/JNRD/No.17/jnrd_179_art1.pdf

2022

Kovacic, D., Renda, G., “Considering International Safeguards during the Design of Advanced Reactors and Interfaces with Safety and Security”, International Conference on Topical Issues in Nuclear Installation Safety: Strengthening Safety of Evolutionary and Innovative Reactor Designs, Vienna, Austria, 2022. <https://inis.iaea.org/collection/NCLCollectionStore/Public/54/004/54004822.pdf?r=1>

2024

Kovacic, D.N., Parada, F., Huning, A., Renda, G., Cojazzi, G.G.M., “The meaning of Risk for Safety, Security and Safeguards in the design of Advanced Nuclear Reactors”, IAEA International Conference on Small Modular Reactors and their Applications, Vienna, Austria, October 21-25, 2024.

France

2004

Grenèche, D., and Xerri, C., "How useful can Probability Risk Assessment tools be for Proliferation Resistance assessment", 7th International Conference on Probabilistic Safety Assessment (PSAM 7), Berlin, Germany, June 14-18, 2004. https://link.springer.com/chapter/10.1007/978-0-85729-410-4_142

2008

Grenèche, D., "A Practical Tool to Assess the Proliferation Resistance of Nuclear Systems: the SAPRA Methodology", ESARDA Bulletin - Special Issue on Proliferation Resistance, N° 39, pp. 41-49, October, 2008. <https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=41058923>

2009

Grenèche, D., and Boucher, L., "A Status of Methodology Developments in France for Assessing Proliferation Resistance of Nuclear Energy Systems", Global 2009, Paris, France, September 6-11, 2009. <https://www.osti.gov/etdeweb/biblio/21228494>

Japan

2011

Kawakubo, Y., Inoue, N., Watahiki, M., Suzuki, M., Kuno, Y., and Mochiji, T., "Study of response time for proliferation time evaluation", Transactions of the American Nuclear Society Winter Meeting, Washington, DC, USA, October 30-November 3, 2011.

Republic of Korea

2005

Kang, J., "Analysis of nuclear proliferation resistance", "Analysis of nuclear proliferation resistance", Progress in Nuclear Energy, vol. 47, Issues 1-4, pp. 672-684, 2005. <https://www.sciencedirect.com/science/article/abs/pii/S0149197005001228>

2006

Yim, M-S., "Nuclear nonproliferation and the future expansion of nuclear power", Progress in Nuclear Energy, vol. 48, Issue 6, pp. 504-524, August, 2006. <https://www.sciencedirect.com/science/article/abs/pii/S014919700500209X>

2007

Kang, J., "Proliferation resistance of PEACER system", Progress in Nuclear Energy, vol. 49, Issue 2, pp. 115-119, March, 2007. <https://www.sciencedirect.com/science/article/abs/pii/S0149197006001053>

2008

Li, J., Yim, M-S., and McNeils, D.N., "Assessing the proliferation resistance of nuclear fuel cycle systems using a fuzzy logic-based barrier method", Nuclear Technology, vol. 162, Number 3, pp. 293-307, June, 2008.

2009

Kwon, E-H., and Ko, W.I., "Evaluation method of nuclear nonproliferation credibility", Annals of Nuclear Energy, vol. 36, Issue 7, pp. 910-916, July, 2009.

<https://www.sciencedirect.com/science/article/abs/pii/S0306454909001030>

Yoo, H., "A new physical protection measure for evaluating risks at nuclear facilities", Annals of Nuclear Energy, vol. 36, Issue 9, pp. 1463-1468, September, 2009.

<https://www.sciencedirect.com/science/article/abs/pii/S030645490900190X>

2010

Li, J., Yim, M-S., and McNelis, D.N., "Model-based calculations of the probability of a country's nuclear proliferation decisions", Progress in Nuclear Energy, vol. 52, Issue 8, pp. 789-808, November, 2010. <https://www.sciencedirect.com/science/article/abs/pii/S0149197010001034>

2011

Skutnik, S.E., and Yim, M-S., "Assessment of fuel cycle proliferation resistance dynamics using coupled isotopic characterization", Nuclear Engineering and Design, vol.241, Issue 8, pp. 3270-3282, August, 2011. <https://www.sciencedirect.com/science/article/abs/pii/S0029549311004845>

2012

Skutnik, S.E., and Yim M-S., "An Examination of simplification and uncertainty on material attractiveness evaluation for proliferation resistance assessment", Nuclear Technology, vol. 179, Number 3, pp. 374-381, September, 2012. <https://www.tandfonline.com/doi/abs/10.13182/NT12-A14169>

Kim, H.D., Shin, H.S., Song, D.Y., Lee, T.H., Han, B.Y., Ahn, S.K., and Park, A.H., "Application of Safeguards-By-Design for the Pyroprocessing Facilities in the ROK", Journal of Nuclear Material management, vol. XL, pp. 24-31, Summer, 2012. Application of Safeguards-By-Design for the Pyroprocessing Facilities in ROK | INMM Resources

2013

Kim, H.D., Kwon, E-H., Ahn S-K., Park, S-H., and Ku, J-H., "3S-by-Design for Engineering-Scale Pyroprocessing Facility", ESARDA Symposium, Bruges, Belgium, May, 2013. https://www.researchgate.net/publication/290581838_3S_Safeguards_Security_Safety_based_pyroprocessing_facility_safety_evaluation_plan

2017

Kim H-D., Park, S-H., Ahn, S-K., Seo, H., and Won, B-H., "Status of Safeguards R&D on Pyroprocessing related Facilities at KAERI", ESARDA Bulletin, No. 55, pp. 59-63, December, 2017. <https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=49062085>

2018

Kim, H.D., Ahn S.K., Ku J-H., Park, J-M., and Lee, K-S., "The History and Status of KAERI's Research Activities to Strengthen Non-proliferation for Nuclear Fuel Cycle", INMM 59th Annual Meeting, Baltimore, MD, USA, July 22-26, 2018.

Russian Federation

2002

Chebeskov, A.N., Oussanov, V.I., Pshakin, G.M., and Korobeynikov, V.V., "Approaches to Assess Attractiveness of Fissile Materials towards their Misuse and Theft", 12th MEPhI International seminar VOLGA, Moscow, Russia, September 2-6, 2002.

Chebeskov, A.N., Oussanov, V.I., Korobeynikov, V.V., and Tikhomirov, B.B., "System Analysis of Weapons and Civilian Plutonium Utilization Scenarios Taking Into Account Economic, Nonproliferation and Ecology Factors", 12th MEPhI International seminar VOLGA, Moscow, Russia, September 2-6, 2002.

Chebeskov, A.N., "Methods of Proliferation Risk Assessment for Nuclear Fuel Cycle Stages", 12th MEPhI International seminar VOLGA, Moscow, Russia, September 2-6, 2002.

Poplavski, V.M., Chebeskov, A.N., Oussanov, V.I., Korobeinikov, V.V., and Tikhomirov, B.B., "An Approach to Evaluate Nuclear Fuel Cycle Proliferation Resistance", Russia-France Workshop, IBRAE RAS, Moscow, Russia, October 10-11, 2002.

2003

Chebeskov, A.N., Oussanov, V.I., Korobeynikov, V.V., and Tikhomirov, B.B., "One of the Possible Approaches to Assess Attractiveness of Plutonium of Different Origin", International Workshop, Obninsk, Russia, June 03-05, 2003.

Chebeskov, A.N., Oussanov, V.I., Korobeynikov, V.V., and Tikhomirov, B.B., "Development of Multi-Attribute Analysis Methodology to Assess Risk of Fissile Material Proliferation", International Workshop, Obninsk, Russia, June 03-05, 2003.

Chebeskov, A.N., Korobeynikov, V.V., and Tikhomirov, B.B., "Study of Proliferation Risk in Nuclear Fuel Cycles with Plutonium Breeding", International Workshop, Obninsk, Russia, June 03-05, 2003. https://link.springer.com/chapter/10.1007/978-0-85729-410-4_144

Chebeskov, A.N., Oussanov, V.I., Korobeynikov, V.V., Iougai, S.V., and Tikhomirov, B.B., "An Approach to Evaluate Proliferation Attractiveness of Plutonium of Various Origins", Global 2003, New Orleans, LA, USA, November 16-20, 2003.

Chebeskov, A.N., Oussanov, V.I., Korobeynikov, V.V., and Tikhomirov, B.B., "One of the Possible Approaches to Evaluate Attractiveness of Plutonium of Different Origin", International Forum, Obninsk, Russia, December 08-12, 2003.

Chebeskov, A.N., Oussanov, V.I., Korobeynikov, V.V., Iougai, S.V., and Tikhomirov, B.B., "Comparative Analysis of Fissile Material Risk Proliferation in Fuel Cycles with Fast and Thermal Reactors", International Forum, Obninsk, Russia, December 08-12, 2003.

2005

Butler, J., Chebeskov, A.N., Dyer, J., Edmunds, T., and Oussanov, V.I., "The United States and Russia Evaluate Plutonium Disposition Options with Multi-attribute Utility Theory", INTERFACES, USA, January-February, 2005.

<https://pubsonline.informs.org/doi/10.1287/inte.1040.0112>

A.N. Chebeskov, V.V. Korobeynikov, E.G. Kudryavtsev, and B.B. Tikhomirov, "Quantitative Approach to Evaluate Attractiveness of Nuclear Fuel Cycle Materials", International Conference, Moscow, Russia, July 13-15, 2005.

V.M. Poplavsky, A.N. Chebeskov, Korobeynikov, V.V., and Tikhomirov, B.B., "Comparative Analysis of Proliferation Risk in Open and Closed Nuclear Fuel Cycles", International Conference, Moscow, Russia, July 13-15, 2005.

Chebeskov, A.N., Eliseev, V.A., and Matveev, V.I., "Fuel Cycle of Advanced Fast Reactors and Problem of Nonproliferation", International Conference, Moscow, Russia, July 13-15, 2005.

Zrodnikov, A.V., Chebeskov, A.N., Korobeynikov, V.V., and Tikhomirov, B.B., "Multi-Attribute Analysis of Nuclear Fuel Cycle Resistance to Nuclear Weapons Proliferation", NATO Workshop, Yerevan, Armenia, October 3-6, 2005. https://link.springer.com/chapter/10.1007/1-4020-4921-8_4

2006

Chebeskov, A.N., Korobeynikov, V.V., and Tikhomirov, B.B., "Methodical Approach towards Assessment of Features of Fuel Cycle Materials which are Important for Nonproliferation", 14th MEPhI International Workshop VOLGA, Moscow, September 4-8, 2006.

2007

Kagramanyan, V.S., Chebeskov, A.N., Mostinskiy, S.B., Fedorov, Yu.S., and Shkabura, I.A., "Closed Nuclear Fuel Cycle Technologies in Solving Nonproliferation for Broad-Scale Nuclear Power Development", 2nd International Conference of "Rosenergoatom", Moscow, Russia, November 28-29, 2007.

Butler, J., Chebeskov, A.N., Dyer, J., Edmunds, T., Jia, J., and Oussanov, V.I., "The Adoption of Multi-attribute Utility Theory for the Evaluation of Plutonium Disposition Options in the United States and Russia", monograph Advances in Decision Analysis, pp. 489-513, Cambridge University Press, 2007.

Chebeskov, A.N., Korobeynikov, V.V., and Tikhomirov, B.B., "Risk Proliferation Studies in the Cycles with Plutonium Breeding", Nuclear Power 'News of Higher Education Institutes', 4b, pp. 62-71, 2007.

2008

Korobeynikov, V.V., Chebeskov, A.N., and Tikhomirov, B.B., "Preliminary Assessment of Innovative Nuclear Energy System using INPRO Methodology, Nonproliferation Aspect", International Meeting on Nonproliferation, Obninsk, Russia, September 29-October 3, 2008.

Chebeskov, A.N., and Kagramanyan, V.S., "Role of the International Fuel Centers with Fast Reactors in Minimization of Proliferation Risk", 16th Pacific Basin Nuclear Conference, Aomori, Japan, October 13-18, 2008.

2009

Chebeskov, A.N., and Kagramanyan, V.S., "Role of the International Fuel Centers with Fast Reactors in Minimization of Proliferation Risk", Global 2009, Paris, France, September 6-11, 2009. <https://inis.iaea.org/collection/NCLCollectionStore/Public/40/092/40092065.pdf?r=1>

Kagramanyan, V.S., and Chebeskov, A.N., "International Nuclear Fuel Centers in Global Nuclear Power Infrastructure", International Workshop on Non-Proliferation, Obninsk, Russia, September 30-October 2, 2009.

Zrodnikov, A.V., Kagramanyan, V.S., Chebeskov, A.N., and Poplavskaya, E.V., "International Nuclear Fuel Cycle Centers in the Global Infrastructure of Nuclear Power (Technological aspects of the problem)", International Conference on Fast Reactors and Related Fuel Cycles: Challenges and Opportunities (FR09), Kyoto, Japan, December 07-11, 2009. <https://inis.iaea.org/collection/NCLCollectionStore/Public/41/070/41070080.pdf>

2011

Chebeskov, A.N., "An Approach to Proliferation Risk Assessment for Research Nuclear Reactors", Russian-American Symposium on the Conversion of Research Reactors to Low Enriched Uranium Fuel, Moscow, Russia, June 6-10, 2011.

2013

Avrorin, E.N., and Chebeskov, A.N., "Fast reactors and nuclear nonproliferation", International Conference on Fast Reactors and Related Fuel Cycles (FR13), Paris, France, March 4-7, 2013.

2014

Avrorin, E.N., and Chebeskov, A.N., "Fast reactors and nuclear non-proliferation", Nuclear Power 'News of Higher Education Institutes', No.1, pp. 64-76, 2014.

2015

Avrorin, E.N., and Chebeskov, A.N., "Fast reactors and nuclear non-proliferation", Nuclear Energy and Technology, vol.1, Issue 1, pp. 1-7, September, 2015. <https://www.sciencedirect.com/science/article/pii/S2452303815000023>

2016

L'vova, E.M., and Chebeskov, A.N., "Analyses of the attractiveness of materials as applied to the fuel cycle of large capacity fast reactor of BN-type", Nuclear Power 'News of Higher Education Institutes', No.2, pp. 35-42, 2016. <https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=48093490>

2017

L'vova, E.M., and Chebeskov, A.N., "Analyses of the attractiveness of materials as applied to the on-site fuel cycle of fast reactor BR-1200 of natural safety", Nuclear Power 'News of Higher Education Institutes', No.26, pp. 106-117, 2017.

Klinov, D.A., Gulevich, A.V., and Chebeskov, A.N., "Fast neutron reactors and problem of nuclear nonproliferation", IX International Forum ATOMEXPO, Moscow, Russia, Gostiny dvor, 19-21 June, 2017.

Avrorin, E.N., Gulevich, A.V., Simonenko, V.A., “Fast Neutron Reactors, Fuel Cycles and Problem of Nuclear Nonproliferation”, International Conference on Fast Reactors and Related Fuel Cycles: Next Generation Nuclear Systems for Sustainable Development (FR17), Yekaterinburg, Russian Federation, 26–29 June 2017.

L'vova, E.M., and Chebeskov, A.N., “Analysis of Attractiveness of Nuclear Materials as Applied to the On-site Fuel Cycle of Inherently Safe Fast Reactor”, Nuclear Engineering and Technology, 3 (2017), pp. 224-230, 2017.
<https://www.sciencedirect.com/science/article/pii/S2452303817300614>

2018

Kagramanyan, V.S., Chebeskov, A.N., Dekusar, V.V., and Gurskaya, “O.S. Solution of the problem of SNF from thermal reactors in a two-component system of nuclear power”, Eleventh International Scientific and Technical Conference: ‘Safety, Efficiency and Economics of Nuclear Power Industry’, Moscow, Russia, May 23-24, 2018.

Klinov, D.A., Gulevich, A.V., and Chebeskov, A.N., “Export potential of Russian fast reactors and technologies of closed nuclear fuel cycle”, V International Scientific and Technical Conference, ‘Innovative Projects and Nuclear Power Technologies’ (MNTK NIKIET-2018), JSC NIKIET, Moscow, Russia, October 2-5, 2018.

Avrorin, E.N., Simonenko, V.A., Gulevich, A.V., and Chebeskov, A.N., “Fast reactors, fuel cycles and problem of nuclear non-proliferation”, Problems of atomic science and technology ‘nuclear and reactor constants’, Issue 2, 2018.

2019

Gulevich, A.V., Dekusar, V.M., Klinov, D.A., and Chebeskov, A.N., “Export potential of Russian fast reactors and technologies of closed nuclear fuel cycle”, Problems of atomic science and technology ‘nuclear and reactor constants’, Issue 2, 2019.
<https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=51041600>

Kagramanyan, V.S., Chebeskov, A.N., Dekusar, V.V., and Gurskaya, O.S., “Solving the problem of SNF from thermal reactors in a two-component system of nuclear power”, Problems of atomic science and technology ‘nuclear and reactor constants’, Issue 2, 2019.

2020

Chebeskov, A.N., “Features of fast neutron reactors for export deliveries”, Scientific and Practical Webinar of Experts of the Union of Veterans of the Science City, AtomInfo.ru, December 04, 2020.

United Kingdom

2012

National Nuclear Laboratory, “Proliferation Resistance and Physical Protection – Position Paper”, 2012. https://www.nnl.co.uk/wp-content/uploads/2019/01/prpp_position_paper_-_final.pdf

United States

2002

Denning, R., Bari, R.A., Eagle, J., Mladineo, S., Olinger, C., Rochau, G., Roglans-Ribas, J., and Schock, R., "Guidelines for the Performance of Non-Proliferation Analysis", Transactions of the American Nuclear Society Winter Meeting, Washington, DC, USA, November 17-21, 2002.

2003

Bari, R.A., Roglans-Ribas, J., Denning, R., and Mladineo, S., "Assessing the Proliferation Resistance of Innovative Nuclear Fuel Cycles", IAEA International Conference on Innovative Technologies for Nuclear Fuel Cycles and Nuclear Power, Vienna, Austria, June 23-26, 2003. https://www.researchgate.net/publication/241978480_Assessing_the_Proliferation_Resistance_of_Innovative_Nuclear_Fuel_Cycles

Bari, R.A., Peterson, P., Roglans-Ribas, J., and Mladineo, S., "Proliferation Resistance Modeling", ESARDA/INMM Workshop on Safeguards Perspectives for a Future Nuclear Environment, Como, Italy, October 14-16, 2003. https://www.researchgate.net/profile/Per-Peterson-2/publication/228512897_Proliferation_Resistance_Modeling/links/547646d30cf29afed6142054/Proliferation-Resistance-Modeling.pdf

Bari, R.A., Roglans-Ribas, J., Denning, R., Mladineo, S. and Bley, D., "Assessing Comparative Risks of Nuclear Proliferation from Various Systems", ISTC/ENCI/ESARDA Seminar: A Fresh Look at Nuclear Safeguards, Como, Italy, October 17-18, 2003.

Denning, R., Bari, R.A., Eagle, J., Mladineo, S., Olinger, G., Rochau, G., Roglans-Ribas, J., and Schock, R., "Guidelines for the Performance of Nonproliferation Assessments", Pacific Northwest National Laboratory Report, PNNL-14294, 2003. <https://www.osti.gov/biblio/15007945>

2004

Bari, R.A., Roglans-Ribas, J., Denning, R., and Mladineo, S., "Methods for Proliferation Resistance of Nuclear Fuel Cycles", Seventh International Conference on Probabilistic Safety Assessment and Management, Berlin, Germany, June 14-18, 2004.

Papazoglou, I.A., and Bari, R. A., "A Decision Analysis Based Methodology for the Assessment of the Proliferation Resistance of Nuclear Power Systems", Seventh International Conference on Probabilistic Safety Assessment and Management, Berlin, Germany, June 14-18, 2004. https://link.springer.com/chapter/10.1007/978-0-85729-410-4_143

2007

DeMuth, S., Thomas, K., Wallace, R., Tobin, S., Dixon, E. T., and Boyer, B., "Increased Proliferation Resistance for 21st Century Nuclear Power", 20th World Energy Congress, Rome, Italy, November 11-15, 2007. <https://www.osti.gov/etdeweb/servlets/purl/21108088>

Durst, P.C., Therios, I., Bean, R., Dougan, A., Boyer, B., Wallace, R., Ehinger, M., Kovacic, D., and Tolk, K., "Advanced Safeguards Approaches for New Reprocessing Facilities", PNNL-16674, June, 2007. https://www.pnnl.gov/main/publications/external/technical_reports/pnnl-16674.pdf

Durst, P.C., Ehinger, M., Boyer, B., Therios, I., Bean, R., Dougan, A., and Tolk, K., "Advanced Safeguards Approaches for New TRU Fuel Fabrication Facilities", PNNL-17151, November, 2007. https://digital.library.unt.edu/ark:/67531/metadc900496/m2/1/high_res_d/940231.pdf

2008

Goodman, M., Bari, R.A., Heine, P., Phillips, J., Regalbuto, M., Rosenthal, M., Sprinkle, J., Wallace R., Wigeland, R., Wood, T., and Yates, M., "A Nonproliferation Impact Assessment of the GNEP Programmatic Alternatives", INMM 49th Annual Meeting, Nashville, TN, USA, July 13-17, 2008. <https://resources.inmm.org/annual-meeting-proceedings/nonproliferation-impact-assessment-gnep-alternatives>

Boyer, B. and Schanfein, M., "International Safeguards Inspection: An Inside Look", James E. Doyle, ed., Nuclear Safeguards, Security, and Nonproliferation: Achieving Security with Technology and Policy, Burlington, MA, Butterworth-Heinemann, pp. 97-112, 2008.

Boyer, B., and Scott, S., "Expansion of Nuclear Energy: Demand, Domestic and International Initiatives and Nonproliferation and Safeguards Challenges", Journal of Nuclear Material Management, Summer 2008, vol. XXXVI, Number 4, Deerfield, IL, pp.31-35, 2008. <https://www.ingentaconnect.com/content/inmm/jnmm/2008/00000036/00000004/art00005>

2009

Durst, P.C., Beddingfield, D., Boyer, B., Bean, R., Collins, M., Ehinger, M., Hanks, D., Moses, D.L., and Refalo, L., "Nuclear Safeguards Considerations for the Pebble Bed Modular Reactor (PBMR)", INL/EXT-09-16782, October, 2009. <https://inldigitallibrary.inl.gov/sites/sti/sti/4374060.pdf>

2010

Moses, D.L., and Ehinger, M.H., "Supplemental Report on Nuclear Safeguards Considerations for the Pebble Bed Modular Reactor (PBMR)", ORNL/TM-2010/244, May, 2010. <https://info.ornl.gov/sites/publications/Files/Pub26683.pdf>

Wonder, E.F., Durst, P.C., Hockert, J., Zentner, M.D., Bari, R.A., and Wigeland, R., "Facility Safeguardability Analysis in Support of Safeguards by Design", IAEA Symposium on International Safeguards: Preparing for Future Verification Challenges, Vienna, Austria, November 1-5, 2010. <https://inldigitallibrary.inl.gov/sites/sti/sti/4685567.pdf>

US Department Of Energy (DOE)/National Nuclear Security Administration (NNSA) Office of Nonproliferation and International Security, "Third International Meeting on Next Generation Safeguards – Safeguards by Design", Washington, DC, USA, December 14-15, 2010.

Moses, D.L., "Very High-Temperature Reactor (VHTR) Proliferation Resistance and Physical Protection (PR&PP)", ORNL/TM-2010/163, August, 2010. <https://inldigitallibrary.inl.gov/sites/sti/sti/4685567.pdf>

Demuth, S., Chapter Ed., Bari, R., Bathke, C., Boyer, B., Burr, T., Ehinger, M., Hedberg, M., Howell, J., Luetzenkirchen, K., Mayer, K., Schanfein, M., Stevens, R., Wallace, R., and Wallenius, M., "Chapter 29: Proliferation Resistance and Safeguards", Dan Gabriel Cacuci (ed.), Handbook of Nuclear Engineering, Springer Science+Business Media, pp.-3421-3538, 2010.

Boyer, B., Beddingfield, D., Durst, P.C., and Bean, R., "Pebble Bed Modular Reactor Safeguards: Developing New Approaches and Implementing Safeguards by Design", Pacific Northwest International Conference on Global Nuclear Security—the Decade Ahead, Portland, OR, USA, April, 2010. <https://www.osti.gov/biblio/993508>

Boyer, B., Durst, P.C., Budlong-Sylvester, K., DeMuth, S., and Pan, P.Y., "Third International Meeting on Next Generation Safeguards (NGS3): Synopsis of the Safeguards-By-Design Reactor Working Group Conclusions", INMM 52nd Annual Meeting, Palm Desert, CA, USA, July, 2010. <https://resources.inmm.org/annual-meeting-proceedings/third-international-meeting-next-generation-safeguards-ngs3-synopsis>

2012

ari, R.A., Durbin, K., Johnson, S.J., Gitau, E., Hockert, J., Wonder, E.F., and Zentner, M.D., "Facility Safeguardability Assessment: A Toolkit for Safeguards by Design", INMM 53rd Annual Meeting, Orlando, FL, USA, July 15-19, 2012. <https://resources.inmm.org/annual-meeting-proceedings/facility-safeguardability-assessment-toolkit-safeguards-design>

2014

Boyer, B., Budlong Sylvester, K., Murphy, C.L., and Doyle, J.E., "Developing a State-level Approach for a Hypothetical State with Advanced Fuel Cycle Capabilities", INMM 55th Annual Meeting, Atlanta, GA, USA, July, 2014. <https://resources.inmm.org/annual-meeting-proceedings/la-ur-14-26083-1-developing-state-level-approach-hypothetical-state>

Budlong Sylvester, K., Pilat, J.F., Anzelon, G., Murphy, C.L., Reynolds, C., Boyer, B., "Use of Performance Targets in the State Level Concept", INMM 55th Annual Meeting, Atlanta, GA, USA, July, 2014. <https://resources.inmm.org/annual-meeting-proceedings/use-performance-targets-state-level-concept>

2015

Sprinkle, J., Boyer, B., Dale, D., Stevens, R., Hanks, D., Schanfein, M., Johnson, S., Scholz, M., Lockwood, D., and Alwin, J., "Improving Safeguards Implementation in Nuclear Facility Design and Construction", INMM 56th Annual Meeting, Indian Wells, CA, USA, July, 2015. <https://resources.inmm.org/annual-meeting-proceedings/improving-safeguards-implementation-nuclear-facility-design-and>

2016

Cipiti, B.B., "Safeguards Performance Modeling: New Approaches for Safeguards by Design", "Safeguards Performance Modeling: New Approaches for Safeguards by Design", INMM 57th Annual Meeting, Atlanta, GA, USA, July, 2016. <https://resources.inmm.org/annual-meeting-proceedings/safeguards-performance-modeling-new-approaches-safeguards-design>

Moran, B., Stern, W., Cooley, J., Marzo, M., "Enhancing Efficiency of Safeguards at Facilities that are Shutdown or Closed-Down, including Those being Decommissioned", BNL-113347-2016, Brookhaven National Laboratory, December, 2016. [https://urldefense.com/v3/https://www.bnl.gov/isd/documents/94300.pdf;!DOxrgLBm!UmbMh-bYn2JMp9EhNe5hJ41gGs49Ezt98deduFT-GwlkUZt4vxMjYQHlyf6T42w73cirw\\$](https://urldefense.com/v3/https://www.bnl.gov/isd/documents/94300.pdf;!DOxrgLBm!UmbMh-bYn2JMp9EhNe5hJ41gGs49Ezt98deduFT-GwlkUZt4vxMjYQHlyf6T42w73cirw$)

2017

Thomas, M., Williams, A. D., Osborn, D. M., Jones, K. A., Kalinina, E. A., Parks, M. J. and Mohagheghi, A.H., "An Integrated 3S Model for Safeguards for International Transport of Spent Nuclear Fuel", ESARDA 39th Annual Meeting, Dusseldorf, Germany, 2017. <https://www.osti.gov/servlets/purl/1431714>

Williams, A.D., Osborn, D.M., Jones, K.A., Kalinina, E.A., Cohn, B., Parks, M.J., Parks, E., Jeantete, B., Thomas, M.A. and Mohagheghi, A.H., "Intermediate Results from a System-Theoretic Framework for Mitigating Complex Risks in International Transport of Spent Nuclear Fuel", Institute of Nuclear Materials Management (INMM) 58th Annual Meeting Indian Wells, CA, USA, July 16-20, 2017. <https://www.osti.gov/servlets/purl/1431753>

Williams, A.D., Osborn, D.M., Jones, K.A., Kalinina, E.A., Cohn, B., Mohagheghi, A.H., De Menno, M., Thomas, M., Parks, M.J., Parks, E. and Jeantete, B., "System Theoretic Frameworks for Mitigating Risk Complexity in the Nuclear Fuel Cycle", Sandia Report, SAND2017-10243, September, 2017. <https://www.sandia.gov/research/publications/details/system-theoretic-frameworks-for-mitigating-risk-complexity-in-the-nuclear-f-2017-09-01/>

2018

Williams, A.D., Osborn, D.M., and Kalinina, E.A., "System Theoretic Frameworks for Mitigating Risk Complexity in the International Transportation of Spent Nuclear Fuel", Probabilistic Safety Assessment and Management PSAM 14, Los Angeles, CA, USA, September, 2018. <https://www.osti.gov/servlets/purl/1503420>

2019

Cipiti, B., Browne, M., and Reim, M., "Demonstration of Safeguards and Security by Design through the Virtual Facility Distributed Test Bed", 9th INMM/ESARDA/INMMJ Joint Workshop, Plaza HEISEI, Tokyo, Japan, October 7-10, 2019.

Shoman, N., and Cipiti, B., "Development of a Liquid-Fueled Molten Salt Reactor Safeguards Model", SAND2019-7415, Sandia National Laboratories, June, 2019. <https://www.osti.gov/biblio/1559564>

Shoman, N, Cipiti, B., and Betzler, B., "Safeguards and Process Modeling for Molten Salt Reactors", Global and Top Fuel 2019, Seattle, Washington, USA, September 22-26, 2019. <https://www.ans.org/pubs/proceedings/article-47031/>

Rosenthal, M., et al., "Deterring Nuclear Proliferation: The Importance of IAEA Safeguards", Brookhaven Science Associates, LLC, February, 2019. <https://www.bnl.gov/NNS/IAEAtextbook.php>

Boyer, B., "International Safeguards Inspections", James E. Doyle, ed., Nuclear Safeguards, Security, and Nonproliferation: Achieving Security with Technology and Policy, 2nd Edition, Chapter 9, Elsevier, Amsterdam, The Netherlands, 2019. <https://www.sciencedirect.com/science/article/abs/pii/B9780128032718000096>

2020

Cipiti B., Parks, M.J., and Shoman, N., "The Role of Modeling and Simulation in the MPACT 2020 Milestone", INMM 61st Annual Meeting, Virtual Meeting, July 12-16, 2020. <https://resources.inmm.org/annual-meeting-proceedings/role-modeling-and-simulation-mpact-2020-milestone>

Parks, M.J., Knudsen, R., Noel, T.G., Stromberg, B. and Cipiti, B., "Physical Security Modeling Development of an Electrochemical Facility", SAND2020-10051R, Sandia National Laboratories, September, 2020. <https://www.osti.gov/biblio/1668130>

2021

- Cipiti, B., Browne, M., and Reim, M., "The MPACT 2020 Milestone: Safeguards and Security by Design of Future Nuclear Fuel Cycle Facilities", Journal of Nuclear Materials Management, Vol. 49, No. 1, 2021.
<https://www.ingentaconnect.com/content/inmm/jnmm/2021/00000049/00000001/art00002>
- Evans A.S., et al., "U.S. Domestic Small Modular Reactor Security by Design", SAND2021-0768, Sandia National Laboratories, March, 2021. https://energy.sandia.gov/wp-content/uploads/2022/07/US_DomesticSmallModularReactorPhysicalProtectionSystemAnalysis_SAND2021-0768_REV-4.pdf
- Cheng, L.-Y., Bari, R.A., "Non-Proliferation Aspects of Nuclear Energy", Editor-in-Chief E. Greenspan, Elsevier Science, Encyclopedia of Nuclear Energy, June, 2021.
<https://urldefense.com/v3/https://doi.org/10.1016/B978-0-12-819725-7.00120-3> ;!!DOxrgLBm!UmbMh-bYn2JMp9EhNe5hJ41qGs49E_zt98deduFT-GwIkUZt4vxMjYQHlyf6T42wbPQwRQ\$
- Cipiti, B., "Advanced Reactor Deployment: U.S. Safeguards and Security Challenges", Institute of Nuclear Materials Management/ESARDA 2021 Meeting, Virtual Meeting, August, 2021.
<https://www.osti.gov/servlets/purl/1884110>
- Williams, A.D., Cipiti, B., and Evans, A., "A Systems-Theoretic Framing for an Integrated Nuclear Energy Safety, Safeguards, and Security (3S) Approach", Institute of Nuclear Materials Management/ESARDA 2021 Meeting, Virtual Meeting, August, 2021.
<https://resources.inmm.org/annual-meeting-proceedings/systems-theoretic-framing-integrated-nuclear-energy-safety-safeguards>
- Dion, M.P., et al., "MC&A for MSRs: FY2021 Report", ORNL/SPR-2021/2305, Oak Ridge National Laboratory, September, 2021. <https://info.ornl.gov/sites/publications/Files/Pub168879.pdf>
- Garrett, A.G., et al., "Advanced Reactor Safeguards: Lessons from the IAEA Safeguards Domain", PNNL-21977, Pacific Northwest National Laboratory, September, 2021.
- Evans, A.S., et al., "U.S. Domestic Pebble Bed Reactor: Security by Design", SAND2021-13122R, Sandia National Laboratories, October, 2021. https://energy.sandia.gov/wp-content/uploads/2022/07/US_DomesticPebbleBedReactorSecurity-bydesign_SAND2021-13122R.pdf
- Evans, A.S., et al., "U.S. Domestic Microreactor: Security by Design", SAND2021-13779R, Sandia National Laboratories, October, 2021. https://energy.sandia.gov/wp-content/uploads/2022/07/US_DomesticMicroreactorSecurity-bydesignSAND2021-13779_R.pdf
- Gibbs, P., et al., "Pebble Bed Reactor Domestic Safeguards", ORNL/SPR-2021/170396, Oak Ridge National Laboratory, November, 2021.
- Weinmann-Smith, R., et al., "Material Control and Accounting Regulatory and Technical Considerations for Microreactors", LA-UR-22-21265, Los Alamos National Laboratory, December, 2021.
- V. Davis, B. Goddard, G. Hitt, S. Richards, C. Gariazzo, "Modeling 233Pa Generation in Thorium-fueled Reactors for Safeguards", November 30, 2021. <https://doi.org/10.2172/1880332>

E. Uribe, S. Gilbert, L. Evans, N. Luciano, R. Reed, N. McGirl, J. Powers, "Accountable Nuclear Material Production from Fissile Isotope Precursors in Advanced Fuel Cycles: The Case of Protactinium", Proceedings of the INMM & ESARDA Joint Virtual Annual Meeting, Virtual, August 01, 2021. <https://www.osti.gov/biblio/1881721>

2022

Bari, R. A., Cheng, L.-Y., and Boyer, B., "Outreach to Industry on Safeguards by Design Concept for Small Modular Reactors – Introduction of the Facility Safeguardability Assessment Process to Westinghouse Electric Company LLC", BNL-222920-2022-FORE, Brookhaven National Laboratory, January 12, 2022. <https://www.osti.gov/biblio/1863877>

Mulyana D., Chirayath S.S., "Proliferation resistance assessment of a typical pebble bed reactor fuel", Annals of Nuclear Energy, Volume 165, 108769, January, 2022. <https://doi.org/10.1016/j.anucene.2021.108769>

Mulyana D., Chirayath S.S., "The impact of refueling schemes on the proliferation resistance of a pebble bed reactor", Annals of Nuclear Energy, Volume 170, 109010, June 01, 2022. <https://doi.org/10.1016/j.anucene.2022.109010>

Gibbs, P., "FY 2022 Pebble Bed Reactor Domestic Safeguards: Material Control and Accounting Systems-Requirements and Concepts", ORNL/SPR-2022/2660, Oak Ridge National Laboratory, September, 2022.

Dion, M.P., and Hogue, K.K., "Domestic MC&A Recommendations for Liquid-Fueled MSRs", ORNL/SPR-2022/2673, Oak Ridge National Laboratory, September, 2022. <https://info.ornl.gov/sites/publications/Files/Pub187082.pdf>

Ritter, C., Hays, R., Browning, J., Stewart, R., Bays, S., Reyes, G., Schanfein, M., Pluth, A., Sabharwal, P., Kunz, R., Shields, A., Koudelka, J., Zohner, P., "Digital Twin to Detect Nuclear Proliferation: A Case Study", J. Energy Resour. Technol. 144(10): 102108, October, 2022. [https://urldefense.com/v3/https://doi.org/10.1115/1.4053979;!!DOxrgLBm!GfOH7DVP74LdS1hrWAYLSdQKd_n13lcYghQeIR0t8Ef2k6mmlx5kVJlkH4E3ZOOxM6OQsSDnUSbxvu4uVgO6NOeGTLC-86V4\\$](https://urldefense.com/v3/https://doi.org/10.1115/1.4053979;!!DOxrgLBm!GfOH7DVP74LdS1hrWAYLSdQKd_n13lcYghQeIR0t8Ef2k6mmlx5kVJlkH4E3ZOOxM6OQsSDnUSbxvu4uVgO6NOeGTLC-86V4$)

Kovacic, D., et al., "FY 2022 Summary Report - Pebble Bed Reactor Domestic Safeguards: Fuel Burnup and Fissile Material Loss and Production for Pebble Bed Reactor Nuclear Material Accounting", ORNL/SPR-2022/2635, Oak Ridge National Laboratory, November, 2022. <https://energy.sandia.gov/wp-content/uploads/2023/01/NE-5-PBR-MCA-FY22-Pebble-Burnup-13DEC2022a.pdf>

Evans, A., Russell, J.L., Cipiti, B.B., "New Security Concepts for Advanced Reactors", Nuclear Science and Engineering, Volume 197, S70-S79, November 01, 2022.

E. Hoffman, A. Kasam-Griffith, P. O'Neal, S. Richards, Z. Beauvais, C. Gariazzo, R. Suh, "Safeguarding Commercial Breed and Burn Sodium-Cooled Fast Reactors", November 30, 2022. <https://doi.org/10.2172/1971524>

2023

Mulyana D., Chirayath S.S., "Proliferation resistance of light water reactor versus pebble bed reactor", Annals of Nuclear Energy, Volume 188, 109797, August, 2023. <https://doi.org/10.1016/j.anucene.2023.109797>

Kovacic, D., et al., "Nuclear Material Control & Accounting for Pebble Bed Reactors", ORNL/SPR-2023/2988, Oak Ridge National Laboratory, December, 2023.

Shoman, N., Moosir, P., "Novel Strategies for Safeguarding Molten Salt Reactors", Joint INMM ESARDA Annual Meeting, Vienna, Austria, May 22-26, 2023.
https://resources.inmm.org/sites/default/files/2023-07/finalpaper_193_0502075923.pdf

2024

Hogue, K.K., et al., "Planning for Material Control and Accounting at Liquid-Fueled Molten Salt Reactors", ORNL/SPR-2023/3181, Oak Ridge National Laboratory, January, 2024.
<https://info.ornl.gov/sites/publications/Files/Pub203300.pdf>

Meehan, A.S., Sallee, K.J., IYER, N.C., WAUD, B.D., DIX, J., Landers, C.C., "Proliferation Resistance Integration for Next Generation Research Reactors", International Conference on Nuclear Security: Shaping the Future, Vienna, Austria, May 20-24, 2024.

Evans, A., et al., "U.S. Domestic Molten Salt Reactor: Security-by-Design", SAND2024-07607R, Sandia National Laboratories, June, 2024.

P. Mulligan, D. Glasgow, B. La Riviere, "Fabrication and Testing of Micro Flux Monitors in the High Flux Isotope Reactor", September 01, 2024. <https://www.osti.gov/biblio/2472690>

2025

Cihang Lu, Arantxa Cuadra, Lap-Yan Cheng, "Enhancing Safeguardability of Microreactors: Fuel Diversion Detection Using Monte Carlo Neutronics Modeling and Machine Learning", ANS Annual Conference 2025, Chicago, IL, USA, June 15-18, 2025.
<https://www.ans.org/pubs/transactions/article-58652/>

S.S. Chirayath, R.M. Chamberlin, K.K. Hogue, J.M. Osborn, S.E. Skutnik, L.M. Crabtree, N.T. Hubley, L.G. Evans, J.P. Joshi, M.M. Arno, T.E. Hanlon, "Proliferation Resistance Assessment Methodology: Development of a Proliferation Resistance Optimization of Advanced Reactors and Fuel Cycles (PRO-AR&FC) Methodology Using Intrinsic Attributes", IAEA Technical Meeting on Proliferation Resistance of Fast Reactors and Associated Fuel Cycles, Vienna, Austria, August 18-22, 2025.

M.M. Arno, A.J. Brunett, T. Fei, S.S. Chirayath, "Assessing a Proliferation Resistance Methodology: Sodium-Cooled Fast Reactor (SFR) Case Study. Case studies of SFR and other advanced reactor designs for developing a proliferation resistance optimization methodology", IAEA Technical Meeting on Proliferation Resistance of Fast Reactors and Associated Fuel Cycles, Vienna, Austria, August 18-22, 2025.

S.S. Chirayath, R.M. Chamberlin, K.K. Hogue, J.M. Osborn, S.E. Skutnik, L.M. Crabtree, N.T. Hubley, L.G. Evans, J.P. Joshi, M.M. Arno, M. Paul, T.E. Hanlon, J.A. Johnson, "A Methodology Development for Proliferation Resistance Optimization of Advanced Reactors and Fuel Cycle", Advances in Nuclear Nonproliferation Technology and Policy Conference (ANTPC 2025), Washington, D.C., USA, November 9-12, 2025. <https://www.ans.org/pubs/proceedings/article-59730/>

C. Faucett, S. Elliott, N. Shoman, "Development of Machine Learning Algorithm for Pebble Bed Modular Reactor Misuse Detection", Sandia National Laboratories, SAND2025-04885, February 28, 2025. <https://www.osti.gov/biblio/2563811>

- Hogue, K.K.; Arno, M.M.; Sobel, P., "Diversion Path Analysis: A Proposed Methodology to Develop and MC&A Approach for Liquid-Fueled Molten Salt Reactors", Oak Ridge National Laboratory, ORNL/SPR-2025/4250, October 01, 2025. <https://www.osti.gov/biblio/3002044>
- Chirayath, S.S.; DeGuire, T.G.; Shah, M.D.; Arno, M.M.; Hogue, K.K., "Control Boundary Analysis for Liquid-Fueled Molten Salt Reactors", Oak Ridge National Laboratory, ORNL/SPR-2025/4221, September 01, 2025. <https://www.osti.gov/biblio/3002078>
- Evans, A.; Sweet, S.; Hahn, A.; Pierce, R.; Nickerson, C., "Cyber-Physical Tabletop Exercise for Small Modular Reactor Facilities", Sandia National Laboratories, SAND2025-12429R, September 01, 2025. <https://www.osti.gov/biblio/2999080>
- Evans, A.; McCullough, M., "Microreactor Security-By-Design Recommendations for Domestic and International Deployments", Sandia National Laboratories, SAND2025-11644R, March 01, 2025. <https://www.osti.gov/biblio/2589613>
- Evans, A.; Sweet, S.; Abell, D.; Stromberg, B.; McCullough, M., "Modularization of Small Modular Reactor Facilities: Physical Protection Recommendations", Sandia National Laboratories, SAND2025-11085R, September 01, 2025. <https://www.osti.gov/biblio/2588286>
- Oncken, J.; Chwasz, C.; Eggers, S.; Ulrich, T., "Proposed Classification of Remote Operations for Nuclear Reactors Based on Physical and Cybersecurity Considerations", Idaho National Laboratory, INL/RPT-25-06057, 2025.
- Shah, M.D.; Hartanto, D., "Consequence Analysis of Sabotage-Induced Radiological Releases in Sodium-Cooled Fast Microreactors", Nuclear Engineering and Design 444, 114360, August 02, 2025. <https://www.osti.gov/biblio/2575296>

IAEA

2012

- Sprinkle, J.K., Ciuculescu, C., Smith, L.E., Stevens, R., Wishard, B., Honkamaa, T., Martikka, E., Koutsoyannopoulos, C., and Schwalbach, P., "Safeguards by Design Experience in Finland", 9th International Conference on Facility-Safeguards Interface, Savannah, GA, USA, September 23-28, 2012.
- Whitlock, J.J., Sprinkle, J. K., "Proliferation Resistance Considerations for Remote Small Modular Reactors", AECL Nuclear Review, Vol. 1, 2012.
https://www.researchgate.net/publication/275497676_Proliferation_Resistance_Considerations_f_or_Remote_Small_Modular_Reactors

2013

- Cooley, J., Catton, A., Ciuculescu, C., Poirier, S., Sprinkle, J.K., Stevens, R., and Tuley, N., "IAEA Safeguards in New Nuclear Facilities", INMM 54th Annual Meeting, Atlanta, GA, USA, July 20-24, 2013. <https://resources.inmm.org/annual-meeting-proceedings/iaea-safeguards-new-nuclear-facilities>

2017

- Poirier, S., "Lessons Learned from Safeguards Implementation for Facilities under Construction", Fourth International Conference on Nuclear Power Plant Life Management, Lyon, France, October 23-27, 2017.

Poirier, S., Whitlock, J., and Boyer, B., "Safeguards Considerations in the Design of Nuclear Facilities", Fourth International Conference on Nuclear Power Plant Life Management, Lyon, France, October 23-27, 2017.

[https://conferences.iaea.org/event/134/contributions/4149/attachments/2698/3165/iaea_sq-sbd POSTER FOR plim 2017 1016.pdf](https://conferences.iaea.org/event/134/contributions/4149/attachments/2698/3165/iaea_sq-sbd_POSTER_FOR_plim_2017_1016.pdf)

2018

Boyer, B., Disser, J., Moldovan, B., and Fairclough, M., "Application of IAEA Safeguards to Uranium Mining and Processing Activities", International Symposium on Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues (URAM-2018), Vienna, Austria, 2018.

2019

Poirier, S., Whitlock, J., Boyer, B., and Baird, K., "Supporting Nuclear Growth Through Safeguards By Design", 39th Annual Conference of the Canadian Nuclear Society Ottawa, ON, Canada, 2019.

<https://inis.iaea.org/search/searchsinglerecord.aspx?recordsFor=SingleRecord&RN=52027439>

Boyer, B., Disser, J., Sebastien R., Gagne, D., Poirier, S., Whitlock, J., Walczak-Typke, A., and Norman, C., "The IAEA's Physical Model: Fine-Tuning Nuclear Fuel Cycle Understanding for Robust State-Level Safeguards", Journal of Nuclear Material Management, vol. XLVI, Number 3, Mt. Laurel, NJ, pp.107-116, 2019.

<https://www.ingentaconnect.com/content/inmm/jnmm/2018/00000046/00000003/art00011>

B. Boyer, B., Poirier, S., Whitlock, J., "International Atomic Energy Agency Safeguards Challenges in Research Reactors and Critical Assemblies", Proceedings of RRFM/IGORR 2019 Conference, Dead Sea Resort, Jordan, 2019.

(This page has been intentionally left blank)

Appendix A: Selected IAEA and IAEA-INPRO publications

IAEA

2001

International Atomic Energy Agency, "IAEA Safeguards Glossary 2001 Edition", International Nuclear Verification Series No. 3, 2001, Vienna, Austria.
https://www.iaea.org/sites/default/files/iaea_safeguards_glossary.pdf

2002

International Atomic Energy Agency, "Proliferation Resistance Fundamentals for Future Nuclear Energy Systems", STR-332, 2002, Vienna, Austria.

2007

International Atomic Energy Agency, "Combating Illicit Trafficking in Nuclear and Other Radioactive Material", Technical Guidance No. 6, 2007, Vienna, Austria. https://www-pub.iaea.org/MTCD/Publications/PDF/pub1309_web.pdf

2009

International Atomic Energy Agency, "Facility Design and Plant Operation Features that Facilitate the Implementation of IAEA Safeguards", IAEA-STR-360, 2009, Vienna, Austria.

2010

International Atomic Energy Agency, "Technical Features to Enhance Proliferation Resistance of Nuclear Energy Systems", IAEA Nuclear Energy Series No. NF-T-4.5, 2010, Vienna, Austria.
https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1464_web.pdf

International Atomic Energy Agency, "Status of Minor Actinide Fuel Development", IAEA Nuclear Energy Series, NF-T-4.6, 2010, Vienna, Austria. <https://www.iaea.org/publications/8224/status-of-minor-actinide-fuel-development>

2011

International Atomic Energy Agency, "Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities", INFCIRC/225/Revision 5, 2011, Vienna, Austria.
<https://www.iaea.org/publications/8629/nuclear-security-recommendations-on-physical-protection-of-nuclear-material-and-nuclear-facilities-infcirc225revision-5>

2013

International Atomic Energy Agency, "International Safeguards in Nuclear Facility Design and Construction", IAEA Nuclear Energy Series No. NP-T-2.8, 2013, Vienna, Austria. http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1600_web.pdf

International Atomic Energy Agency, “Legal and Institutional Issues of Transportable Nuclear Power Plants: A Preliminary Study”, IAEA Nuclear Energy Series, NP-T-3.5, 2013, Vienna, Austria.
<https://www.iaea.org/publications/10516/legal-and-institutional-issues-of-transportable-nuclear-power-plants-a-preliminary-study>

2014

International Atomic Energy Agency, “Options to Enhance Proliferation Resistance of Innovative Small and Medium Sized Reactors”, NP-T-1.11, 2014, Vienna, Austria.
<https://www.iaea.org/publications/10559/options-to-enhance-proliferation-resistance-of-innovative-small-and-medium-sized-reactors>

International Atomic Energy Agency, “International Safeguards in the Design of Nuclear Reactors”, IAEA Nuclear Energy Series, No. NP-T-2.9, 2014, Vienna, Austria.
<https://www.iaea.org/publications/10710/international-safeguards-in-the-design-of-nuclear-reactors>

2015

International Atomic Energy Agency, “Use of Nuclear Material Accounting and Control for Nuclear Security Purposes at Facilities”, IAEA Nuclear Security Services, No. 25-G, 2015, Vienna, Austria. <https://www.iaea.org/publications/10763/use-of-nuclear-material-accounting-and-control-for-nuclear-security-purposes-at-facilities>

International Atomic Energy Agency, “Nuclear Security Series Glossary Version 1.3”, November, 2015, Vienna, Austria. <https://www-ns.iaea.org/downloads/security/nuclear-security-series-glossary-v1-3.pdf>

2017

International Atomic Energy Agency, “International Safeguards in the Design of Fuel Fabrication Plants”, IAEA Nuclear Energy Series, NF-T-4.7, 2017, Vienna, Austria.
<https://www.iaea.org/publications/10746/international-safeguards-in-the-design-of-fuel-fabrication-plants>

International Atomic Energy Agency, “International Safeguards in the Design of Uranium Conversion Plants”, IAEA Nuclear Energy Series, NF-T-4.8, 2017, Vienna, Austria.
<https://www.iaea.org/publications/10759/international-safeguards-in-the-design-of-uranium-conversion-plants>

2018

International Atomic Energy Agency, “International Safeguards in the Facilities for Long Term Spent Fuel Management”, IAEA Nuclear Energy Series, NF-T-3, 2018, Vienna, Austria.

2019

International Atomic Energy Agency, “Waste from Innovative Types of Reactors and Fuel Cycles”, IAEA Nuclear Energy Series, NW-T-1.7, 2019, Vienna, Austria.
<https://www.iaea.org/publications/12226/waste-from-innovative-types-of-reactors-and-fuel-cycles>

International Atomic Energy Agency, “Waste from Innovative Types of Reactors and Fuel Cycles”, IAEA Implementing Guides No. 11-G (Rev.1), 2019, Vienna, Austria. https://www-pub.iaea.org/MTCD/Publications/PDF/PUB1840_web.pdf

International Atomic Energy Agency, “International Safeguards in the Design of Reprocessing Plants”, IAEA Nuclear Energy Series, NF-T-3.2, 2019, Vienna, Austria. https://www-pub.iaea.org/MTCD/Publications/PDF/PUB1866_web.pdf

International Atomic Energy Agency, “International Safeguards in the Design of Enrichment Plants”, IAEA Nuclear Energy Series, NF-T-4.10, 2019, Vienna, Austria. <https://www.iaea.org/publications/13452/international-safeguards-in-the-design-of-enrichment-plants>

2022

International Atomic Energy Agency, “IAEA Safeguards Glossary 2022 Edition”, 2022, Vienna, Austria. https://www-pub.iaea.org/MTCD/Publications/PDF/PUB2003_web.pdf

International Atomic Energy Agency, “IAEA Nuclear Safety and Security Glossary: Terminology used in Nuclear Safety, Nuclear Security, Radiation Protection and Emergency Preparedness and Response, interim edition”, 2022, Vienna, Austria. <https://www.iaea.org/publications/15236/iaea-nuclear-safety-and-security-glossary>

2023

International Atomic Energy Agency, “Technical Approaches for the Management of Separated Civilian Plutonium”, IAEA Nuclear Energy Series No. NF-T-4.11, 2023, Vienna, Austria. <https://www.iaea.org/publications/14701/technical-approaches-for-the-management-of-separated-civilian-plutonium>

International Atomic Energy Agency, “International Safeguards in the Design of Radioactive Waste Management Programmes”, IAEA Nuclear Energy Series No. NW-T-1.28 [IAEA Preprint] , 2023, Vienna, Austria. https://inis.iaea.org/collection/NCLCollectionStore/_Public/54/089/54089363.pdf?r=1

2024

International Atomic Energy Agency, “Guidebook on Spent Fuel Storage Options and Systems”, Technical Reports Series No. 240, 2024, Vienna, Austria. <https://www.iaea.org/publications/15169/guidebook-on-spent-fuel-storage-options-and-systems>

IAEA-INPRO

2007

International Atomic Energy Agency, “Guidance for the Application of an Assessment Methodology for Innovative Nuclear Energy Systems”, INPRO Manual – Physical Protection, Volume 6 of the Final Report of Phase 1 of the International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO), IAEA-TECDOC-1575/Vol. 6, July, 2007 , Vienna, Austria.

2008

International Atomic Energy Agency, “Guidance for the Application of an Assessment Methodology for Innovative Nuclear Energy Systems”, INPRO Manual – Proliferation Resistance, Volume 5 of the Final Report of Phase 1 of the International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO), IAEA-TECDOC-1575 Rev. 1, November, 2008 , Vienna, Austria. https://www-pub.iaea.org/MTCD/publications/PDF/TE_1575_CD/PDF/TE_1575_vol5_2008.pdf

2009

Yoo, H., Kwak, S-W., Chang, S-S., Kim, J-S., and Yoon W-K., "Development of an evaluation parameter for physical protection in INPRO and its case study on Republic of Korea's PWRs", *Annals of Nuclear Energy*, vol.36, Issue 6, , pp. 844-848, June, 2009 , .
<https://www.sciencedirect.com/science/article/abs/pii/S0306454909000358>

2010

Chang, H.L., Ko, W.I., Whitlock, J., Zhou, K., Cojazzi, G.G.M., Sevini, F., Haas, E., and Zentner, M., "Update of the INPRO Methodology for Evaluating Proliferation Resistance", INMM51th Annual Meeting, July 11-15, 2010, Baltimore, USA.
<https://publications.jrc.ec.europa.eu/repository/handle/JRC59189>

2011

Chang, H.L., Bari, R., Chayama, H., Cojazzi, G.G.M., Haas, E., Killeen, T., Ko, W.I., Park, J.H., Pomeroy, G., Pshakin, G., Qian, H., Sevini, F., Sprinkle, J.K., Whitlock, J., and Zentner, M.D., "PRADA – Next Steps", INMM 52nd Annual Meeting, July 17-21 2011, Palm desert, California, USA. <https://resources.inmm.org/annual-meeting-proceedings/prada-next-steps>

International Atomic Energy Agency, "Introduction to the Use of the INPRO Methodology in a Nuclear Energy System Assessment", IAEA Nuclear Energy Series, NP-T-1.12, 2011, Vienna, Austria. <https://www.iaea.org/publications/8591/introduction-to-the-use-of-the-inpro-methodology-in-a-nuclear-energy-system-assessment>

International Atomic Energy Agency, "INPRO Collaborative Project: Proliferation Resistance and Safeguardability Assessment Tools (PROSA)", International Atomic Energy Agency, IAEA-TECDOC-1966, 2011, Vienna, Austria. <https://www.iaea.org/publications/14895/inpro-collaborative-project-proliferation-resistance-and-safeguardability-assessment-tools-prosa>

2012

Lee, Y., Lee, J.W., and Park, J-H., "INPRO Studies of proliferation resistance for DUPIC Fuel Cycle", *Nuclear Technology*, vol.179, Number 1, pp. 97-105, July, 2012 , Vienna, Austria.
<https://www.tandfonline.com/doi/abs/10.13182/NT12-A14070>

International Atomic Energy Agency, "INPRO Collaborative Project: Proliferation Resistance: Acquisition/diversion Pathways Analysis (PRADA)", International Atomic Energy Agency, IAEA-TECDOC-1684, 2012, Vienna, Austria. https://www-pub.iaea.org/MTCD/publications/PDF/TE_1684_web.pdf

2016

International Atomic Energy Agency, "INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Environmental Impact of Stressors", IAEA Nuclear Energy Series, NF-T-3.15, 2016, Vienna, Austria. <https://www.iaea.org/publications/10888/inpro-methodology-for-sustainability-assessment-of-nuclear-energy-systems-environmental-impact-of-stressors>

2020

Boyer, B., Kuznetsov, V., Khartabil, H., Korinny, A., and Gladyshev, M., “20 Years of INPRO: An Integrated Forward Looking Activity Building a Framework for Sustainable Nuclear Power in the 21st Century”, INMM 61st Annual Meeting, July, 2020 , Baltimore, MD, USA.

<https://resources.inmm.org/annual-meeting-proceedings/20-years-inpro-integrated-forward-looking-activity-building-framework>

2021

Boyer, B., Ganda, F., Gladyshev, M., Khartabil, H., Korinny, A., Kuznetsov, V., “INPRO – Moving into a Third Decade of Innovation Relevant to Nuclear Materials Handling”, Proceedings INMM 62nd Annual Meeting, August, 2021 , Virtual Meeting, . <https://resources.inmm.org/annual-meeting-proceedings/inpro-moving-third-decade-innovation-relevant-nuclear-materials-handling>

Ganda, F., Boyer, B., Haas, E., “INPRO Collaborative Project: Proliferation Resistance and Safeguardability Assessment Tools (PROSA)”, INMM 62nd Annual Meeting, August, 2021 , Virtual Meeting, . <https://resources.inmm.org/annual-meeting-proceedings/inpro-collaborative-project-proliferation-resistance-and-0>

2023

Scherer, C., Ardhammar, M., Boyer, B., Lee, J.-S., Poirier, S., Adams, S., Bathke, C., Chirayath, S., Cojazzi, G.G.M., Renda, G., Reyes, G., van der Ende, B., “Updating and Enhancing the INPRO Proliferation Resistance Methodology for Better Sustainability”, INMM & ESARDA Joint Annual Meeting, May 22-25, 2023, Vienna, Austria.

Scherer, C., Ardhammar, M., Boyer, B., Lee, J.-S., Poirier, S., Adams, S., Bathke, C., Chirayath, S., Cojazzi, G.G.M., Renda, G., Reyes, G., van der Ende, B., “Updating and Enhancing the INPRO Proliferation Resistance Methodology for Better Sustainability”, INMM & ESARDA Joint Annual Meeting, May 22-25, 2023 , Vienna, Austria.

Bikmurzin, R., Scherer, C., and Boyer, B., “Using INPRO Methodology for a Sustainability Assessment of Advanced and Innovative Small Modular Reactors”, INMM & ESARDA Joint Annual Meeting, May 22-25, 2023, Vienna, Austria.

2022

Scherer, C., Ardhammar, M., Boyer, B., Korinny, A., Lee, J.-S., and Whitlock, J., “INPRO Proliferation Resistance Methodology Revision as a Tool for States to Assess Proliferation Resistance in Proposed Nuclear Energy Systems”, Symposium on International Safeguards: Reflecting on the Past and Anticipating the Future, IAEA-CN--303-103, 2022, Vienna, Austria. https://inis.iaea.org/collection/NCLCollectionStore/_Public/54/089/54089265.pdf

Scherer, C. and Boyer, B., “Using the INPRO Methodology for a Sustainability Assessment in Safety, Safeguards, and Security (3S)”, International Conference on Topical Issues in Nuclear Installation Safety: Strengthening Safety of Evolutionary and Innovative Reactor Designs, October 18-21, 2022, Vienna, Austria. https://inis.iaea.org/collection/NCLCollectionStore/_Public/54/089/54089265.pdf

2024

Scherer, C., Das, N., Jeon, S., and Sayin, G., “Sustainability of Innovative Nuclear Energy Systems Using INPRO Methodology”, 2024 ANS Annual Conference, All In on Nuclear Deployment: The Stakes Have Never Been Higher, June 16-19, 2024, Nevada, USA.

Scherer, C. and Das, N., "Implementation of 3S by Design in INPRO", International Conference on Small Modular Reactors, October 21-25, 2024, Vienna, Austria.

2026

IAEA INPRO, "INPRO Methodology For Sustainability Assessments Of Nuclear Energy Systems: Proliferation Resistance", INPRO Manual, IAEA Nuclear Energy Series, NG-T-3.? [IAEA Pre Print], To be issued in 2026, Vienna, Austria. <https://inis.iaea.org/records/cyapj-y6b63>

THE GENERATION IV INTERNATIONAL FORUM

Established in 2001, the Generation IV International Forum (GIF) was created as a co-operative international endeavor seeking to develop the research necessary to test the feasibility and performance of fourth generation nuclear systems, and to make them available for industrial deployment by the 2030s. Under the new 2025 GIF Framework Agreement, GIF brings together countries, as well as Euratom, representing 27 EU member states, to co-ordinate research and develop these systems. GIF has selected six reactor technologies for further research and development: the gas-cooled fast reactor (GFR), the lead-cooled fast reactor (LFR), the molten salt reactor (MSR), the sodium-cooled fast reactor (SFR), the supercritical-water-cooled reactor (SCWR) and the very-high-temperature reactor (VHTR).

A report produced by



Expertise | Collaboration | Excellence

www.gen-4.org