TC ANNUAL REPORTING FORM

IMS Technical Committee

TC 45 Radiation and Nuclear Instrumentation and Systems

Reporting period

Starting date (dd/mm/yy)	Ending date (dd/mm/yy)	Date of submission (dd/mm/yy)
1 January 2025	31 December 2025	10 January 2026

Website https://ieee-ims.org/technical-committees **Last update (mm/yy)**

TC Chair or co-Chairs

First Name	Second Name	Family Name	Affiliation /Address	Membership number	Phone	e-mail address	Date of election
Leticia		Pibida	NIST, 100 Bureau Dr. MS 8462, Gaithersburg, MD 20899 USA	96991737 ☐	301-975-5538	Leticia.pibida@nist.gov	December 2020
Christina		Forrester	ORNL	97052109	865-755-8551	forrestercd@ornl.gov	August 2024

Secretary (check the right box) Present Not Present

First Name	Second Name	Family Name	Affiliation /Address	Membership number	Phone	e-mail address	Date of election
Richard		Kouzes	PNNL	00089987	509-430-0873	RKouzes@ieee.org	December 2020

TC Membership list(*)

First Name	Second Name	Family Name	Affiliation /Address	Membership number	Phone	e-mail address	TC assignments (joining year)
Radoslav		Radev	LLNL	97077496	925-575-0928	radev1@llnl.gov	SA IMS 2020
Sachidananda		Babu	NASA	41457761	240-678-0728	sachi.babu@nasa.gov	SA IMS 2020
Frank		Sergent	AMETEK/ORTEC	85007537	865-483-2194	frank.sergent@ametek.com	SA IMS 2020

* Please add as many rows as needed

Edward	Walker	Contractor	97076957	865-254-4818	eewjko@yahoo.com	SA IMS 2020
Chad	McKee	DOD	97089971	443-910-7846	chad.b.mckee.civ@mail.mil	SA IMS 2020
Mark	Hoover	Contractor	97075278	304-685-2991	markdhoover@comcast.net	SA IMS 2020
Brian	Young	Contractor	97086604	860-919-0010	byoung67@gmail.com	SA IMS 2020
Joseph	Rotunda	Rotunda Scientific Technologies® LLC	97037328	330-283-0874	joe@rotundascitech.com	SA IMS 2020
Michael	Unterweger	NIST	03490265	301-975-5536	michael.unterweger@nist.gov	SA IMS 2020
Jack	Glover	NIST	95500869	202 573 5487	jack.glover@nist.gov	SA IMS 2023
David	Sullivan	Mirion	99377351	770-432-2744	dASullivan@mirion.com	SA IMS 2023
Steven	Adams	Self-employed	99735812	702- 521-4549	SRAdams27183@gmail.com	SA IMS 2024
Logan	Wilcox	liaison TC-01	96442023	314-753-7179	lmwc65@mst.edu	SA IMS
Zhi	Zhang	EPA	100431204	702-526-8370	Zhang.Zhi@epa.gov	SA IMS 2024
Levan	Tkavadze	E&Z	100549091	404-425-5195	Levan.Tkavadze@ezag.com	SA IMS 2025

TC mission – field of expertise (max. 1000 char. Including spaces)

TC 45 develops and maintains standards pertaining to design and construction, design performance criteria, performance testing against design criteria, calibration, and field response testing of radiological protection instruments and radiometrology instrumentation.

The goals of this Committee are to:

- **Prepare standards related to electrical and electronic equipment and systems for instrumentation specific to radiological and nuclear applications**
- **Prepare standards that address instrumentation used for the measurement of ionizing radiation in the workplace, to the public, and in the environment for radiation protection purposes**
- **Prepare standards that address instrumentation used for illicit trafficking detection and identification of radionuclides**
- **Prepare standards that address instrumentation used for radiation-based security screening**

TC meetings in the reporting period(*)

Date (dd/mm/yy)	Online / Face2Face	Attendance (number)	Information sent within 4 months to (Yes/No) TC Members	Chair of TSAC	IM Magazine	Other (specify)

* Please add as many rows as needed

11/07/2024	Online	11	TC45	TC-01 liaison, NRC, FEMA

Minutes of the yearly meeting (separate file)[1]: yes, 1 file attached

Participation in Society sponsored Events (Conferences, Symposia, Workshops) (*)

Name of the Event	Starting date (event) (dd/mm/yy)	Ending date (event) (dd/mm/yy)	Date Participation (dd/mm/yy)	Type of participation (Yes/No)			
				Sponsorship	Session	Tutorial	Other (specify) [2]
none							

Involvement in standard development(*)

Standard	Working Group	Revision	Activity in the reporting period, including dates	Notes, attendance
PN42.23	*Measurement and Associated Instrument Quality Assurance for Radioassay Laboratories*	New	The PAR that was approved on 25 March 2021 was withdrawn as no work was performed. A new chair was selected and a new PAR was submitted and approved on 11/4/2025. The kickoff meeting will take place around February 2026. On 3 November 2025, during the Radiobioassay & Radiochemical Measurements Conference in Idaho Falls, the WG chair gave a presentaion about the status of the standard, approximately 30 attendees expressed interest in participating in the development of the standard.	This is a revision of the ANSI N42.23 standard
PN42.22	*Traceability Of Radioactive Sources To Nist And Associated Instrument Quality Control*	New	The PAR that was approved on 25 March 2021 was withdrawn as no work was performed. A new chair was selected and a new PAR was submitted and approved on 11/4/2025. The kickoff meeting will take place around February 2026. On 3 November 2025, during the Radiobioassay & Radiochemical Measurements Conference in Idaho Falls, the WG chair gave a presentaion about the status of the standard, approximately 30 attendees expressed interest in participating in the development of the standard.	This is a revision of the ANSI N42.22 standard
PN42.61	*Radiation Data Format for Streaming in Real-Time Data from Radiation Detection Instruments*	New	The standard was published on 25 September 2025.	New project Published 2025
PN42.62	*Performance Criteria for Passive Radiation Imaging Systems*	New	The standard was published in 2023.	New project Published 2023

[1] Yes/No, date of the yearly meeting;

[2] For example, Involvement in reviewing papers (and indicate approximate number of paper reviews for the listed event)

* Please add as many rows as needed

PN42.63	Recommended Practice for Unmanned Aerial Radiation Measurement Systems (UARaMS)	New	The standard was published in 2023.	New project Published 2023
PN42.59	*Standard for Millimeter-Wave Systems for Security Screening of Humans*	New	The standard was published on 23 April 2025.	New project Published 2025
PN42.46	*Standard for Imaging Performance of X-Ray and Gamma-Ray Systems for Cargo and Vehicle Security Screening*	New	PAR approved 21 June 2021. The standard is being developed by the working group. It is expected that this step will be completed by December 2024.	This is a revision of the ANSI N42.46 standard.
PN42.49-1	*Performance Criteria for Non-alarming Personal Emergency Radiation Detectors (PERDs) for Exposure Control*	New	The standard was published on 20 March 2025.	New project Published 2025
PN323AB	*Radiation Protection Instrumentation Test and Calibration, Portable Survey Instruments*	New	The document was circulated within the WG for comments. The WG was meeting regularly in 2025. The documents went through a 2nd recirculation for the IEEE SA ballot.	New project
PN42.55	*Standard for the Performance of Portable Transmission X-Ray Systems for Use in Improvised Explosive Device and Hazardous Device Identification*	New	The WG is currently working on the standard document. The WG met four times so far in 2025. The WG aims to complete the draft and begin the ballot process in the first quarter for 2026.	New project
PN42.35	*Standard for Evaluation and Performance of Radiation Detection Portal Monitors for Use in Homeland Security*	New	The WG was meeting regularly in 2025. The documents went through a 2nd recirculation for the IEEE SA ballot. It was sent to RevCom and it was approved. It is currently with the editor, awaiting for the proof.	This is a revision of the ANSI N42.35 standard.
PN42.37	*Standard for Training for the Radiological/Nuclear Detection Mission*	New	The WG was meeting regularly in 2025. The documents was sent for IEEE SA ballot in November 2025.	This is a revision of the ANSI N42.37 standard.
PN42.32	*Standard for Performance Criteria for Alarming Personal Radiation Detectors for Homeland Security*	New	The PAR was submitted in June 2025 and approved in September 2025. The working group is currently being formed. The kickoff meeting is expected at the begging of 2026.	This is a revision of the ANSI N42.32 standard.

Participation in the development of Society Educational Programs(*)

Program name	Involvement of chapters and sections	Activity in the reporting period, including dates	Notes, attendance

* Please add as many rows as needed

None

Other Activities (tutorials, teaching, career, cooperation, publications, joint activity with chapters or sections) (*)

Type of activity	Starting date (dd/mm/yy)	Ending date (dd/mm/yy)	Activity in the reporting period	Notes, attendance
None				

Recommended candidates(*)

Type (ADCOM, Fellow, Award –specify-)	First Name	Second Name	Family Name	Affiliation /Address	Motivation
None					

TC operating Plan: near-term plans for the upcoming year, including scheduled meetings, activities, and so on (max. 1000 char. Including spaces)

Work on the projects that are being developed under TC 45.

Plan to submit 1 new PAR for review and approval.

Work in the transition of the ANSI N42 standards into the IEEE SA IMS TC45.

Reach out to government agencies to assess the use of the N42 standards and the priority to move them into the IEEE SA IMS TC45.

* Please add as many rows as needed

TC operating plan: long term vision from 2-5 years out, based on IMS Strategic Plan, including areas of strength , areas for improvement, how is the subject area going to change, planned actions for lifting achievement succession plans etc. (max. 1000 char. Including spaces)

The IEEE SA IMS TC 45 interacts with the IEC TC 45 and SC 45B in the development and harmonization of standards for radiation detection instruments. This is an on-going work as new standards are developed, and old standards are revised.

The TC 45 committee also interacts with the ANSI HPS N13 and ISO TC 85/SC 2 committees as the work performed by these committees complement each other.

TC convergence, synergy, cooperation with other TC, from I&M or other societies (max. 1000 char. Including spaces)

The TC plans to promote the development of standards and interact with internal standard agencies, users and industry to recognize gaps in the radiation detection instrument and measurement areas. The TC will work in the adoption of the standards developed under the ANSI N42 committee into the IMS TC 45.

Comments/Suggestions (max. 1000 char. Including spaces)

The N42.59 standard won the IEEE SA Emerging Technology Award in 2025. RECOGNITION For development of the first imaging performance standard for millimeter-wave systems for security screening of humans. https://standards.ieee.org/about/awards/ceremonies/

TC 45 was awarded the 2024 Outstanding Technical Committee Award

* Please add as many rows as needed