



NSAI

ANNUAL REPORT 2020

NSAI TECHNICAL COMMITTEE
NSAI/TC 49/SC 03 - ROBOTICS

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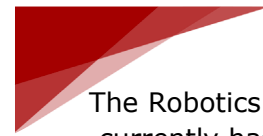
1 Chairman's Statement

In 2020 NSAI offered the position of Chairman to Mr Tom Meany, who accepted the role and chaired the last meeting of NSAI/TC 49/SC 03 on the 2020-12-17.

Mr Meany is a functional safety technical specialist on the Industrial and Instrumentation Group working at Analog Devices (Limerick) for over 7 years, with extensive experience in the area of Functional Safety. Mr Meany is a member of NSAI/TC 48/SC 14, NSAI/TC 48/SC 10, NSAI TC 48/SC 01 and NSAI/ETC/TC 100/SC 1.

2 Introduction

This Standards Committee was created as a Working Group to feed into the National Steering Committee on Collaborative Robotics by following the activities of [ISO/TC 299 Robotics](#). The National Steering Committee on Collaborative Robotics was created by the IDA with the purpose of assisting the Irish manufacturing industry with the introduction of industrial robots into collaborative operations and applications with human workers.



The Robotics industry currently has 5 of 21 experts involved in international work

The primary focus of the Standards Committee is on Industrial Robotics at an ISO level and the development of safety requirements through Standards, that will enable the introduction of humans into the workspace of an industrial robot. The workspace of an industrial robot has traditionally been a restricted space. In collaborative application, this workspace will be redefined as a shared space. The safety of the human worker is the ultimate concern.

3 Scope of TC

Standardization in the field of robotics, excluding toys and military applications.

This committee will not produce indigenous Irish Standards. The national committee will participate in the development of International Standards at an ISO level.

The International Standards published by ISO will be adopted as European Standards and harmonised to the Machinery Directive where applicable. NSAI will then adopt these European Standards as Irish Standards.

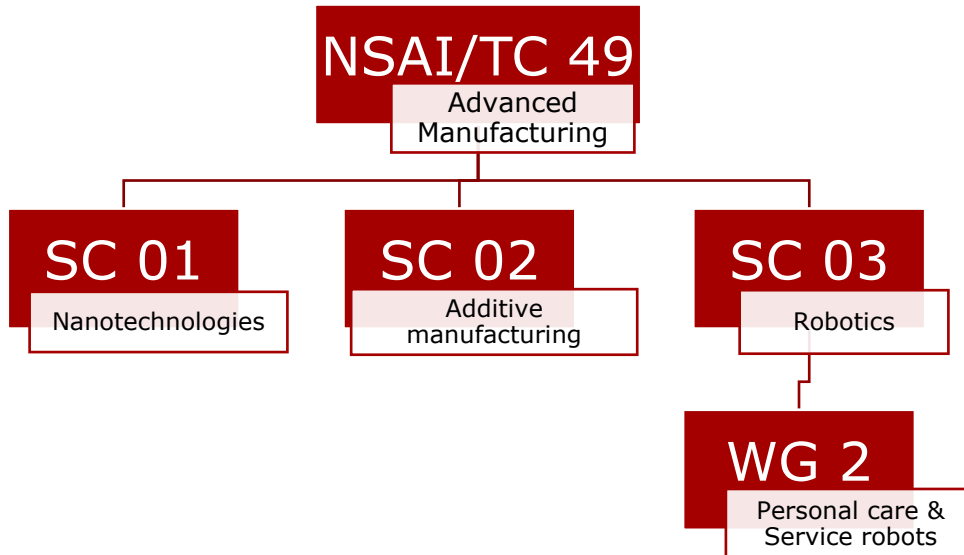
The committee mirrors the following international committees:

Committee Name	Committee Title
ISO/TC 299	Robotics
ISO/TC 299/ WG 1	Vocabulary and characteristics
ISO/TC 299/WG 2	Service robot safety
ISO/TC 299/WG 3	Industrial safety
ISO/TC 299/WG 4	Service robot performance
ISO/TC 299/WG 6	Modularity of service robots
ISO/TC 299/WG 7	Management system for service robots

4 Structure and Membership

4.1 Structure

The Figure below illustrates the structure of the National Committee:



4.2 Members

The list below are the members for the year 2020:

Organisation	Role
NSAI	Secretary
NSAI	Secretary
Analog Devices	Chairman
Trinity College Dublin	Committee member
ITS Ltd	Committee member
Pilz	Committee member
KUKA Robotics	Committee member
Health & Safety Authority	Committee member
Trinity College Dublin	Committee member
TUD	Committee member
Schivo Group	Committee member
KUKA Robotics	Committee member
Eiratech	Committee member
IMR	Committee member
ABB Robotics	Committee member
Rockwell	Committee member
NCR	Committee member
Trinity College Dublin	Committee member
University Limerick	Committee member
UCD	Committee member
IT Carlow	Committee member
Somex Automation	Committee member
DCU	Committee member
Boston Scientific	Committee member

5 Summary of 2020 Activities

5.1 National

5.1.1 Meetings

The meetings were conducted via web-conferencing meeting facilities due to the restrictions caused by Covid-19. Committee members attended the following national meetings as follows:

Meeting No.	Date	Minutes Reference ** optional**
1	02 nd April 2020	N 68
2	17 th December 2020	N 93

5.1.2 National Work

The Standards Committees is represented at the National Steering Committee on Collaborative Robotics and submits a report on progress at each meeting.

5.2 International/Regional

5.2.1 Meetings

Committee members attended international meetings as follows:

Committee Name	Location	Date	No. of Attendees
ISO/TC 299/WG 3	Florida America	February 2020	1
ISO/TC 299/WG 3	Online	June 2020	2
ISO/TC 299/WG 3	Online	August 2020	2
ISO/TC 299/WG 3	Online	December 2020	4

5.2.2 International/Regional Work

Ireland is committed to following and inputting into the revision of the International Standards for the Safety Functionality of Industrial Robotics (ISO 10218). Since 2017 Ireland has been represented at each of the meetings held in Europe and internationally.

The focus of the work is on the requirements around the collaborative applications for robotics and humans.

5.2.3 International/Regional Standards Reviewed

ISO/DIS 10218-1; *Robotics -- Safety requirements for robot systems in an industrial environment -- Part 1: Robots*

ISO/DIS 10218-2; *Robotics -- Safety requirements for robot systems in an industrial environment -- Part 2: Robot systems and integration*

ISO/DIS 11593; *Robotics for industrial environments—Automatic end effector exchange systems – Vocabulary and presentation of Characteristics*

5.2.4 International/Regional Voting Results

The committee voted on nine of the twenty international votes in 2020.

5.3 Regulatory Development/Update

The European Machinery Directive is due to be revised and the Irish Committee will be monitoring this revision to ensure that provisions for robotics are included and that they serve to promote collaborative robotics.

6 Irish Publications/Reviews

6.1 Publications

National standards will not be produced by this committee. The International Standards will be published as European Standards and then adopted as Irish Standards.

6.2 Reviews

The Committee reports to the National Steering Committee on Collaborative Robotics and participates in the work of this group.

7 Work programme for 2021 onwards

ISO/DIS 10218-1; *Robotics -- Safety requirements for robot systems in an industrial environment -- Part 1: Robots*

ISO/DIS 10218-2; *Robotics -- Safety requirements for robot systems in an industrial environment -- Part 2: Robot systems and integration*

ISO/DIS 11593; *Robotics for industrial environments—Automatic end effector exchange systems – Vocabulary and presentation of Characteristics*

8 Additional Information

As of March 2020, in accordance with guidance from ISO, all the meetings were conducted via web-conferencing facilities due to the restrictions caused by Covid-19.

Due to Covid-19, ISO DIS 10218-1 was placed on hold for a period of six months with a number of in person meetings cancelled and rescheduled as virtual meetings.

The recently appointed Chairman, Mr Tom Meany, was presented with a "1997 Award" on Wednesday the 14th of October 2020. The "1997 Award" is presented to members of NSAI Committees in recognition of the significant contribution to the standards work of NSAI.

Mr Tom Meany was presented the award for his promotion of standards and his commitment shown at every National Committee meeting. Mr Meany presented standards under development from the International Electrotechnical Commission with regards to Functional Safety and enabled the dissemination of information to the relevant stakeholders, SMEs and Academia.