

27 July 2021

Thomas J. Fagan Chair The Aerospace Corporation +1. 571.599.5363 tjfagan@ieee.org

Monrad L. Monsen Vice Chair Oracle +1.303.272.9612 monrad monsen@i +1.360.790-9672 eee.org

Ghery Pettit Co-Secretary Pettit EMC Consulting g.pettit@ieee.org Ahalya Srikanth Co-Secretary srikanth.ahalya @gmail.com

Agenda

Committee: TC-2; Electromagnetic Compatibility (EMC) Measurements

Virtual on Webex Place: Date: 27 July 2021 (Tuesday)

Time: 9:00 to 10 AM Central Daylight Time (CDT)

1.0 Call to Order/Introductions

- 1.1 Moment of Silence in remembrance of Don Heirman our Past Chair who passed away on October 30, 2020. Don had been TC-2 Chair since before
- 1.2 Quorum Check: TC2 Meeting Quorum shall be 20% of the membership. Ballots for new officers shall have minimum voting participation of 50% and may include email ballots in the participation count.
- 1.3 Charter

The committee reviews the adequacy of measurement procedures and measurement instrumentation specifications for radiated and conducted emission and immunity tests. Also discussed is the rationale for product emission limits and immunity test levels including performance requirements. The committee also supports EMC standards and procedures that deal with measurements and their uncertainty and how they are interpreted and applied.

2.0 Approval of Minutes from IEEE EMC TC-2 meeting (7 Aug 2020) Virtual IEEE EMC+SIPI 2020 Symposium.

3.0 TC2 Election Announcement

Our last TC2 election was held by email 16-27 August 2020. Don Heirman (our past chair) had chosen to not stand for re-election. Tom Fagan was voted in as the new chair and Monrad Monsen as new vice-chair). The Secretary position was split between Ghery Pettit and Ahalya Srikanth.

4.0 Privacy

Personal data will be handled in accordance with the IEEE Privacy Policy which can be found at: https://www.ieee.org/security-privacy.html . The TC2 minutes will have list attendee names unless you contact the TC2 secretary to ask for your name to not be mentioned. The information you provide in the sign-in roster (including email and company) will be used by the chapter officers for TC2 related notifications/communications.

- 5.0 Committee Membership Status
 - 5.1 Removal of non-active participants from membership roster.

Membership indicates that you have attended the TC-2 committee meeting at least two (2) or more times in the last four (4) years; candidates are shown as attending a single meeting on or after 2018 and no other. By committee rules, these candidates are not members of TC-2 unless they attend a second face-to-face symposium meeting within a four year period.

All attendees will initial the sign-in roster. After the July 2021 virtual TC-2 meeting, those that have not attended a face-to-face TC-2 meeting since 2017 will no longer a TC-2 member but will remain on the list for one additional year (2021) to receive meeting announcements. Those that have not attended a face-to-face TC-2 meeting since 2017 are removed from the list. Any of those that are dropped from the membership list can rejoin TC-2 by attending the requisite number of face-to-face meetings in the time frame noted above.

- 6.0 Current Symposium Activity, July 2021
 - 6.1 Symposium paper review status (top paper, top TC-2 paper, Round 2 reviewing, etc).
 - TC-2 had 52 Regular papers and abstracts submitted (9 abstracts and 43 regular papers)
 - 8 regular papers rejected and 3 abstracts withdrawn
 - Final total is 41 Regular papers and abstracts accepted and sessioned (6 Abstracts and 35 regular papers)
 - 6.2 Symposium Sessions sponsored by TC2 as shown in the final program. TC2 is to be congratulated for sponsoring or participating in the 11 sessions/tutorials listed below. We had 5 sessions in 2020.
 - TP-TUE-1A Emissions
 - TP-TUE-1B Cables and LISN
 - TP-TUE-2A Calibration
 - TP-WED-1B Antennas and Analysis
 - TP-WED-2A Reverberation
 - TP-WED-2B Chambers
 - TP-THU-1A Power Systems
 - TP-THU-1B Immunity
 - TP-THU-2A Automotive
 - TP-FRI-1B Near Field Measurements
 - TP-FRI-2A Shielding
 - 6.3 Symposium Tutorial sponsored by TC2 as shown in the final program.
 - WT-TUE-5 Basic EMC Measurements Tuesday August 3 by Monrad Monsen
- 7.0 Standards Sponsorship Support Review

Below is an excerpt of information from the full matrix from the EMC Society site.

Here is the part that standards play in Technical Committee activity. It is from the EMC Society Bylaws and in particular clause 10.3 which states:

10.3 Functions:

Each Technical Committee shall promote activities in its field of interest and shall provide expert knowledge and assistance to:

a. Receive, generate, and review technical papers within its scope in cooperation with the Transactions Editor and/or the Technical Papers Committee.

- b. Organize and host sessions at meetings of the IEEE at all levels and at meetings of other organizations with which the Society is desirous of cooperating, in accordance with the rules in effect at such meetings.
- c. Arrange for publishing pertinent papers in IEEE publications.
- e. Evaluate "state of the art" in the area of committee interest.
- d. Generate and develop appropriate standards in its field for processing by the IEEE Standards Committee, through the Society's Standards Committee and in accordance with IEEE policies.

Clause 10.3 d above is directly applicable to TC2 (EMC Measurements).

This table shows via the short title and highlighted in yellow those EMCS standards which directly involve measurements and hence TC2 interest. Note that by far the number of standards devoted to measurements is the vast majority.

See https://ieeesdecom.s3.us-east-2.amazonaws.com/Standards_Matrix.html for the latest updates.

- 8.0 Future Symposium Activity
 - 8.1 Future topics for the IEEE EMC+SIPI symposium
 - 2022 Spokane, Washington, August 1 August 5, 2022
 - 2023 Grand Rapids, Michigan, July 31 August 4, 2023
 - 2024 Phoenix, Arizona, July 29 August 2, 2024
 - 8.2 Technical Program Responsibilities and session chair reminders
 - 8.3 2022 Paper Review Deadlines
 - 8.4 Paper reviewers

TC2 members are welcome to be paper reviewers. Don's reviewer list from the past is not available, so Tom and Monrad are creating a replacement list. Please send Monrad and Tom your resume along with your subject matter strengths/expertise so we can identify the best.

- 8.5 New membership
- 8.6 New areas of interest
- 9.0 Any other business?
- 10.0 Action Items
- 11.0 Set meeting and agenda for next meeting(s)
- 12.0 Adjournment



Donald N. Heirman, age 80, passed away on October 30, 2020 in Lincroft, New Jersey. His wife of 45 years—Lois (Smith)—predeceased him in early 2009. Don will be alongside his wife at Arlington National Cemetery.

Don was on active duty in the US Navy from 1963 to 1965. He continued his Navy service in the Naval Reserves until 1985 retired with the rank of Commander.

At the time of his death, he was president of Don HEIRMAN Consultants which was a training, standards, and educational electromagnetic compatibility (EMC) Consultation Corporation which he founded in 1997 after his early retirement from Bell Laboratories. Previously he was with Bell Laboratories for over 30 years in many EMC roles.

He is listed in several "Who's Who" publications including Who's Who in Technology, Who's Who in Science and Engineering and Men of Achievement. His contributions were vast to his EMC discipline where he has been called "Mr. EMC Standards".

A complete review of his career is on his website: www.donheirman.com