

# TC ANNUAL REPORTING FORM

## IMS Technical Committee

### 25 Medical and Biological Measurements

#### Reporting period

| Starting date (dd/mm/yy) | Ending date (dd/mm/yy) | Date of submission (dd/mm/yy) |
|--------------------------|------------------------|-------------------------------|
| January 2024             | December 2024          | 01/02/2025                    |

|         |   |                     |
|---------|---|---------------------|
| Website | <a href="https://ieee-ims.org/technical-committee/tc-25">https://ieee-ims.org/technical-committee/tc-25</a> | Last update (06/23) |
|---------|---|---------------------|

#### TC Chair or co-Chairs

| First Name | Second Name | Family Name | Affiliation /Address | Membership number | Phone           | e-mail address       | Date of election or appointment |
|------------|-------------|-------------|----------------------|-------------------|-----------------|----------------------|---------------------------------|
| Sergio     |             | Rapuano     | University of Sannio | 41333078          | +39 082 4305600 | rapuano@unisannio.it | 2020                            |
| Voicu      |             | Groza       | University of Ottawa | 40275238          | +1 613 745 7550 | VGroza@uOttawa.ca    | 2008                            |

#### 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 or appointment |
|------------|-------------|-------------|-----------------------|-------------------|-------|----------------------------|---------------------------------|
| Sabrina    |             | Grassini    | Politecnico di Torino | 92667897          |       | sabrina.grassini@polito.it | 2020                            |

#### TC Membership list<sup>(\*)</sup>

| First Name | Second Name | Family Name | Affiliation /Address         | Member ship number | Pho ne | e-mail address         | TC assignments (joining year) |
|------------|-------------|-------------|------------------------------|--------------------|--------|------------------------|-------------------------------|
| Marco      |             | Parvis      | Politecnico di Torino, Italy |                    |        | marco.parvis@polito.it | Chair to 2019                 |
| Sergio     |             | Rapuano     | University of Sannio, Italy  |                    |        | rapuano@unisannio.it   | Chair from 2020               |
| Voicu      |             | Groza       | University of Ottawa, Canada |                    |        | vgroza@uottawa.ca      | Co-Chair                      |

\* Please add as many rows as needed

|             |                |               |   |                                  |  |
|-------------|----------------|---------------|---|----------------------------------|--|
| Pasquale    |                | Daponte       | University of Sannio,<br>Italy  | daponte@unisannio.it             | Chairman of<br>MeMeA<br>Steering Committee |
| Gregorio    |                | Andria        | Politecnico di Bari, Italy  | andria@misure.poliba.it          | Member                                     |
| Eulalia     |                | Balestrieri   | University of Sannio,<br>Italy  | balestrieri@unisannio.it         | Member                                     |
| Diego       |                | Barrettino    | University of Applied<br>Sciences and Arts of<br>Southern Switzerland | diego.barrettino@supsi.ch        | Member                                     |
| Kurt        |                | Barbè         | Free University of<br>Bruxelles (VUB)                                 | Kurt.Barbe@vub.ac.be             | Member                                     |
| Miodrag     |                | Bolic         | University of Ottawa,<br>Canada                                       | mbolic@uottawa.ca                | Member                                     |
| Sandro      |                | Carrara       | École Polytechnique<br>Fédérale de Lausanne<br>Switzerland            | sandro.carrara@epfl.ch           | Member                                     |
| Marcantonio |                | Catelani      | University of Florence,<br>Italy                                      | marcantonio.catelani@unifi.it    | Member                                     |
| Max         |                | Cortner       | Boston Scientific, USA  | Max.Cortner@bsci.com             | Member                                     |
| Hilmj       |                | Dajani        | University of Ottawa,<br>Canada                                       | hdajani@site.uottawa.ca          | Member                                     |
| Luca        |                | De Vito       | University of Sannio,<br>Italy  | devito@unisannio.it              | Member                                     |
| Branislav   |                | Djokic        | Ottawa IMS Chapter  | branislav@ieee.org               | Member                                     |
| Imad        | H.             | Elhajj        | American University of<br>Beirut, Lebanon                             | ie05@aub.edu.lb                  | Member                                     |
| Banakhr     |                | Fhad          | Loughborough<br>University<br>Loughborough, UK                        | fbyic@hotmail.com                | Member                                     |
| Rafiq       |                | Goubran       | Carleton University,<br>Canada  | Rafik.Goubran@sce.carleton.ca    | Member                                     |
| Sabrina     |                | Grassini      | Politecnico di Torino,<br>Italy                                       | sabrina.grassini@polito.it       | Secretary                                  |
| Jiabin      |                | Jia           | University of Edinburgh,<br>UK  | Jiabin.Jia@ed.ac.uk              | Member                                     |
| Baki        |                | Karaböce      | TÜBİTAK UME, Turkey   | baki.karaboce@tubitak.gov.tr     | Member                                     |
| Anna        | Maria<br>Lucia | Lanzolla      | Politecnico di Bari, Italy  | lanzolla@misure.poliba.it        | Member                                     |
| Aimè        |                | Lay-Ekuakille | University of Salento,<br>Italy                                       | aime.lay.ekuakille@unisalento.it | Member                                     |

\* Please add as many rows as needed

|           |               |  |                               |        |
|-----------|---------------|--|-------------------------------|--------|
| Francesco | Lamonaca      | University of Sannio,<br>Italy   | flamonaca@unisannio.it        | Member |
| Mart      | Min           | Tallinn University of<br>Technology, Estonia   | mart.min@ttu.ee               | Member |
| Anirban   | Mukherjee     | Indian Institute of<br>Technology Kharagpur,<br>India                                  | manirban@ieee.org             | Member |
| Emil      | Petriu        | University of Ottawa,<br>Canada  | petriu@site.uottawa.ca        | Member |
| Adam      | Polak         | Wroclaw University of<br>Science and Technology  | adam.polak@pwr.edu.pl         | Member |
| Octavian  | Postolache    | Instituto Universitário de<br>Lisboa and Instituto de<br>Telecomunicações,<br>Portugal | octavian.postolache@gmail.com | Member |
| Sreeraman | Rajan         | Carleton University,<br>Ottawa Canada  | sreeraman@ieee.org            | Member |
| Maria     | Graca Ruano   | Algarve University<br>Portugal   | mruano.ualg@gmail.com         | Member |
| Lorenzo   | Scalise       | Università Politecnica<br>delle Marche, Italy  | l.scalise@staff.univpm.it     | Member |
| Mario     | Savino        | Politecnico di Bari Italy  | savino@misure.poliba.it       | Member |
| Jacob     | Scharcansky   | Federal University Rio<br>Grande Brasil  | jacobs@inf.ufrgs.br           | Member |
| Shervin   | Shirmohammadi | University of Ottawa<br>Canada   | drshervin@gmail.com           | Member |
| Aneta     | Stefanovska   | University of Lancaster,<br>UK   | aneta@lancaster.ac.uk         | Member |
| Wendy     | Van Moer      | University of Gaeve,<br>Sweden   | Wendy.VanMoer@vub.ac.be       | Member |
| Annamaria | Varkony-Kozy  | Obuda University,<br>Hungary   | varkonyi-koczy@uni-hobuda.hu  | Member |
| Wuliang   | Yin           | University of<br>Manchester, UK  | Wuliang.Yin@manchester.ac.uk  | Member |
| Lombardo  | Luca          | Politecnico di Torino  | luca.lombardo@polito.it       | Member |
| Iannucci  | Leonardo      | Politecnico di Torino  | leonardo.iannucci@polito.it   | Member |
| Xun       | Chen          | University of Science<br>and Technology of China                                       | xunchen@ustc.edu.cn           | Member |
| Iadarola  | Grazia        | Polytechnic University of<br>Marche  | g.iadarola@staff.univpm.it    | Member |

\* Please add as many rows as needed

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

- Sensors for the measurement of clinical and/or biological parameters. Many new or improved sensors are continuously developed that allow new and more accurate measurements and diagnoses to be performed.
- Data processing either conventional or non-conventional. The enormous amount of data generated by different kinds of instruments, such as TAC and NMR, requires processing strategies, which help the physicians to extract the most important features of each exam.
- Instrument and procedure characterization. Medical instruments and related data processing deeply interact with the physician who emits the diagnoses. This is a remarkable difference with respect to other 'conventional' instruments where standard accepted procedures are used for the uncertainty expression.
- Instrument interoperability and interconnection. Most diagnoses are obtained by combining tests results generated by different instruments. The 'data fusion' is often performed by the physician only at the end of the measurements process, but an easier possibility to access raw data generated by the different instruments could greatly improve the diagnosis quality.
- Measurement techniques for athletic performance. Assessing the athletic performance as well as discovering abnormal behavior due to as an example doped performers requires combining sensor, data processing and instruments and represents a challenge of increasing importance.
- Instruments and devices for impaired people. The advances in the digital processing and the micro and nanotechnology open new and surprising possibilities to help people who need help. This is a highly ethical research everyone should be committed to.
- Maintain liaisons with other committees, groups, societies, and organizations working on soft-computing technologies and in the applications fields.

### TC meetings in the reporting period<sup>(\*)</sup>

| Date (dd/mm/yy)                          | Online / Face2Face | Attendance (number) | TC Members | Information sent within 4 months to (Yes/No) |             |                 |
|--|--------------------|---------------------|------------|--|-------------|-----------------|
|  |                    |                     |            | Chair of TSAC                                | IM Magazine | Other (specify) |
| MeMeA steering committee<br>(23/09/2024) | Telecon            | 15                  | 12         | Yes  |             |                 |
| MeMeA steering committee<br>(27/06/2024) | Face2Face          | 16                  | 12         | Yes  |             |                 |

### Minutes of the yearly meeting (separate file)<sup>1</sup>

#### Participation in Society sponsored Events (Conferences, Symposia, Workshops) <sup>(\*)</sup>

| Name of the Event | Starting date (event)<br>(dd/mm/yy) | Ending date (event)<br>(dd/mm/yy) | Date Participation<br>(dd/mm/yy) | Type of participation (Yes/No) |         |          |  |
|-------------------|-------------------------------------|-----------------------------------|----------------------------------|--------------------------------|---------|----------|--|
|                   |                                     |                                   |                                  | Sponsorship                    | Session | Tutorial | Other (specify) <sup>2</sup>                               |
| I2MTC 2024        | 20/05/24                            | 23/05/24                          | all                              |                                |         |          | Peer review of papers and coordination of Special Sessions |
| MeMeA 2024        | 26/06/24                            | 28/06/24                          | all                              | X                              |         | X        | Organizing entity  |

<sup>1</sup> Yes/No, date of the yearly meeting;

<sup>2</sup> For example, Involvement in reviewing papers (and indicate approximate number of paper reviews for the listed event)

\* Please add as many rows as needed

**Involvement in standard development<sup>(\*)</sup>**

| Standard   | Working Group | Revision         | Activity in the reporting period, including dates | Notes, attendance |
|------------|---------------|------------------|---|-------------------|
| IEEE P1721 | SCOBPM        | PAR<br>Withdrawn |   |                   |

**Participation in the development of Society Educational Programs<sup>(\*)</sup>**

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

**Other Activities (tutorials, teaching, career, cooperation, publications, joint activity with chapters or sections) <sup>(\*)</sup>**

| Type of activity | Starting date (dd/mm/yy) | Ending date (dd/mm/yy) | Activity in the reporting period  | Notes, attendance |
|------------------|--------------------------|------------------------|---|-------------------|
| DL               | <i>several</i>           | <i>several</i>         | Antonio Esposito – DI for 2023-2025 for novel human-computer interactions |                   |

**Recommended candidates<sup>(\*)</sup>**

| Type (ADCOM, Fellow, Award –specify-) | First Name | Second Name | Family Name | Affiliation /Address | Motivation |
|---------------------------------------|------------|-------------|-------------|----------------------|------------|
|---------------------------------------|------------|-------------|-------------|----------------------|------------|

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

The TC sponsored and organized the MeMeA 2024 in Eindhoven, The Netherlands, on June 2024. TC-25 is now working on the organization of the XX edition of MeMeA, which will be held in Greece on May 2025. The TC is also working on an anniversary celebration proposal to thank the colleagues who allowed the growth of the MeMeA Symposium. A paper dedicated to the history of the Symposium highlighting how medical measurements changed in the last 20 years is in preparation and it will be submitted to IM Magazine. The new version of the video actually published on the TC web page, is still disseminated on Youtube. We plan to improve our visibility on the Society web site and on social media.

<sup>\*</sup> 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)**

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The TC plans to continue to sponsor the successful series of the MeMeA symposia in the next years and to look for the opportunity to start a new PAR about the blood pressure measurement in the long term. To that aim the new Procedures and Policies document has been submitted to Standards Association and has been approved.

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

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The TC had valuable synergies with the Italy Chapter of IMS for a parallel event to MeMeA 2016 and with the Minneapolis Chapter for the organization of MeMeA 2017.  
MeMeA is included in the Education Committee strategic plan as a potential venue for new joint initiatives: the IMS Tutorials, the IMS Open Day and the Short Courses. The MeMeA steering committee and the whole TC will contribute to the initiatives.  
Some DL volunteers from the TC are often presented to the DL selections of the Education Committee and one of them used to be very active DL of the Society before COVID.  
The TC-25 is involved in the Publications Committee initiatives to publish papers to raise the awareness of the IEEE members on the IMS technical activities.  
Several TC-25 members are involved in IMS activities and in the AdCom; the TC-25 Chair is currently Executive Vice President and the TC Secretary is currently VP Membership.

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

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