



MANUAL FOR IEEE NTC TECHNICAL ACTIVITIES COMMITTEE

This manual summarizes the roles, objectives, duties, and procedures of the NTC Technical Activities Committee (TAC), including its officers and Technical Committees. It is intended to expand on the NTC Bylaws.

Working with the other NTC boards, the TAC focuses on the research content of the IEEE Nanotechnology Council, tracking technical developments and encouraging innovation in: applications, theory, models, metrics, experiments, architectures, products, initiatives, and other technical areas.

The Vice-President of Technical Activities (VPTA) chairs the TAC. The TAC includes the Chairs and Co-Chairs of all Technical Committees.

The TAC reports to the NTC President and *Adcomm* and coordinates the NTC Technical Committees (TCs). The TAC maintains a website with links to the TCs. For the purposes of evaluating progress of TC's and their research areas, the VPTA collects reports from each TC annually and provides summary reports to the *Adcomm*.

NTC Technical Committees:

The role of each TC is to serve as a focal point for research in a specific area. TCs encourage research in their area by forming a critical mass of researchers (via meetings, web pages, and email) and organizing and promote activities (including meetings and publications as summarized below) that foster dialogue on and experimentation with new results. TCs also evaluate and communicate new developments and advise NTC officers on technical matters as requested. TCs advise Conference Chairs on potential sessions, workshops and tutorials, plenary speakers, and other technical aspects of conference content.

Technical Committees are usually created in response to emerging topics, methods, or applications, and can also be created to coordinate and encourage new research on established topics, methods, or applications (See Appendix I: Establishing New Technical Committees.) TCs are evaluated every 4 years in a process whereupon they are retired or renewed. (See Appendix II: Review of Technical Committees.)

Each TC is defined by a "scope" that describes its technical focus, motivation, and areas of primary interest. Each TC maintains a membership list that includes email contacts of those who have requested membership (it is not necessary to be an NTC member to be a TC member).

Each TC is led by a Chair (who is responsible for prompt communication via email), and up to two Co-Chairs. TC Chairs and Co-Chairs are recommended by the TAC and approved by the NTC President. Chairs and Co-Chairs can serve a maximum of 3 consecutive 2-year terms, and become eligible again after a lapse of 2 years. TC Chairs must be responsive to email from the VPTA and from current and prospective members. TC Chairs can be replaced by the VPTA after a 4-week warning if they are unresponsive to communication.

TCs must be unbiased, open to different views, and cannot be used to promote commercial products or research without clearly acknowledging conflicts of interest and possible risks and limitations of products.

After a new TC is proposed using the process in Appendix I, VPTC presents the proposal in the *Excomm* and the *Excomm* vote determines the acceptance of the new TC.

Technical Activities:

Annually, each TC reports the "technical activities" that have occurred in their area during the past year. In this context, technical activities relate to the TC research area and include:

1. Publications (books, PhD theses, special issues or sections of journals or magazines)
2. Meetings (special workshops, tutorials, sessions, or symposia)
3. Other activities

Duties of the VPTA:

The Vice President of Technical Activities (VPTA) is elected by the Adcomm and serves a 2-year term. Duties of the VPTA are:

1. Encourage NTC research and technical activity
2. *Organize and chair annual TAC meetings*
3. Coordinate TC activities
4. Serve as a reliable point of contact for the TAC
5. Attend *Excomm* and *Adcomm* meetings
6. Coordinate and promptly submit annual reports to the Adcomm
7. Maintain the TAC website
8. Communicate at least twice a year with TC Chairs
9. Promptly respond to inquiries from fellow researchers and the press
10. Alert President about major research developments
11. Propose new initiatives to the TAC, President, and Adcomm
12. Recommend TC Chairs to the President-elect
13. Recommend new TCs to the Adcomm
14. Recommend retiring TCs to the Adcomm

Duties of TC Chairs:

Every 2 years, the incoming NTC President appoints TC Chairs and Co-Chairs. TC Chairs and Co-Chairs serve for 2 years and their term is renewable for up to 2 additional terms (eligible again after a lapse of 2 years). Duties of TC chairs are:

1. Serve as a reliable point of contact for the TC via email
2. Organize technical sessions in major NTC conferences such as IEEE NANO
3. Coordinate and attend the review of papers related to the TC in IEEE NANO
4. Coordinate and promptly submit annual reports to the VPTA
5. Submit one TC Technical Progress Slide (see Appendix IV) on June 1st each year
6. Define and annually update the TC scope
7. Maintain the TC website
8. Maintain the TC membership list (including email addresses)
9. Recruit new members
10. *Attending annual TAC meetings (or sending a representative)*
11. Communicate at least twice a year with TC members via group email
12. Encourage research in their area
13. Advise junior researchers in their area
14. Track major developments in their area
15. Promptly respond to inquiries from fellow researchers and the press
16. Alert VPTA about major research developments
17. Evaluate new results and initiatives when requested by the VPTA
18. Recommend reviewers when requested by Editor-in-Chiefs
19. Self-evaluate progress and consider retirement of the TC
20. Secure at least one paper each year to the IEEE Nanotechnology Magazine from TC members

If a TC Chair will be away from email for more than 2 weeks, he or she shall set up appropriate auto-reply messages and appoint a Co-Chair to handle communication during this period. TC Chairs can be replaced after a 4-week warning by the VPTA if they are unresponsive to communication.

Duties of TC Members:

TC Chairs and Co-Chairs recruit TC Members from the active people in the given field. Duties of the TC Members are:

1. Serve as a reliable point of contact for the TC via email
2. Contribute to the TC by attending the major NTC conferences such as IEEE NANO
3. Promptly respond to inquiries from the TC Chair and Co-Chairs
4. Alert the TC Chair about major research developments
5. Evaluate new results and initiatives when requested by the TC Chair
6. Help for review of NTC conference or journal papers in the TCs given topic

If TC Members are not responsive or do not attend the IEEE NANO conference and other NTC activities within two years, the TC Chair has the right to retire the given TC Member.

Appendix I: Establishing New Technical Committees

It is not difficult to establish a new NTC Technical Committee. The first step is to submit an application with the information below to the VPTA. This is then reviewed and brought before the TAC. If the TAC approves, it is presented for a vote at the next *Excomm* meeting.

Application for Establishing a New Technical Committee:

1. Proposed Title
2. Proposed Scope (under 200 words)
3. Motivation (under 200 words)
 - a. Recent technical developments, growing number of papers, etc.
4. Relationship to existing TCs (under 200 words)
 - a. Be specific, why is it not possible to coordinate this topic under an existing TC?
5. Goals within 2 and 4 years (under 100 words)
6. Proposed Chair and Co-Chairs (with affiliations and contact info)
7. Confirmation that the Proposed Chair and Co-Chairs
 - a. Have reviewed the TAC Manual and are prepared to accept the associated Duties.
8. List of 5 or more confirmed founding members other than co-chairs

Appendix II: Review of Technical Committees

The TAC shall review TCs at least every 4 years. The details of the review process include a report of all activity over the past 4 years, growth in membership, and an honest evaluation of the TC by the TC Chairs on the potential for retiring the TC. TCs will be retired based on voluntary request by the TC Chairs, or due to inactivity or unresponsiveness of the TC-Chairs.

Appendix III: Requirements for TC Websites

Each TC Website must contain:

1. Title
2. Scope statement (under 200 words)

3. Current Number of Members
4. Names and Affiliations of Chair and co-Chairs
5. Contact Info for TC Chair (and others willing to be listed)
6. List of Activities with links
7. Links to related initiatives, labs, events, etc.
8. Links for more info on results presented in
 - a. Most recent TC Technical Progress Slide (see Appendix IV)
9. Archive of past TC Technical Progress Slides
10. Optional: links to key papers and theses
11. Date when last updated

Appendix IV: TC Technical Progress Slide

Each year, each TC prepares an annual Technical Progress Summary that is a one-page powerpoint slide from the Technical Committee illustrating examples of technical progress in their area. This slide is submitted to the VPTA on June 1st every year, and will be presented to the *Adcomm* meeting, and may be printed and handed out to NTC conference attendees. The purpose of the Technical Progress Slide is to increase awareness of the TC, attract members, and inform the NTC community about interesting developments.

The powerpoint slide should clearly indicate the Technical Committee name, URL, and Chair's email (in fonts that can be read when printed to a page). The slides should graphically illustrate at least one technical development (a new theoretical result, application, product, book, etc. with appropriate citations). Further details on the technical development should be available through a link on the TC home page.