"EASY GUIDE" FOR COMPLETING THE ONLINE PETITION TO START A NEW IEEE SENSORS COUNCIL CHAPTER.

Section 1

DEFINITION: A Chapter shall be a technical subunit of a Region, one or more Sections or a Geographic Council. There may be single Society Chapters, joint Society Chapters, and Technical Council Chapters. A Chapter shall comprise a minimum of twelve (12) IEEE voting members of a Society, or group of Societies in the case of a joint chapter and shall be established by petition to the parent geographical and technical organizational units concerned to fulfill the mission of IEEE. In the case of a Technical Council Chapter, a minimum of any twelve (12) IEEE voting members of Council Member Societies in the parent geographical unit shall be required to petition to the geographic unit and to the Technical Council (IEEE Bylaw I-402.6)

The IEEE Sensors Council Chapter Petition is now an online procedure. It is recommended that you review the information in this Easy Guide to prepare and inform you on completing the online petition. To start the petition, go to the "Submit a petition at

https://mga.ieee.org/volunteer-hub/geographic-unit-operations/formations-and-petitions

Before you start the process of submitting a chapter petition, make sure that you are a member of Sensors Council. If you are a member of Sensors Council, you cannot submit a petition to open a chapter in Sensors Council. If you want to become a member of please use the link below.

https://www.ieee.org/membership-catalog/productdetail/showProductDetailPage.html?product=CNCSEN039&searchResults=Y

Once you have entered the online petition form, you will now need the following information:

- Name of the Geographic parent: **Twin Cities Section Chapter R4 R400 (this is an example)**
- Name of the sponsoring Technical parent Technical Council: **Sensors Council** (example)
- Name of the organizer (who becomes interim Chair pending election of a regular Chair at a later organization meeting): **name and IEEE member number (your 8-digit number)**
- Signatures of at least twelve (12) IEEE members, in good standing, of Graduate Student Member, Member, Senior Member or Fellow grade, who are members of the Society(ies) and Section(s) involved. Each petition to form a Technical Council Chapter will be signed by at least 12 IEEE voting members of a Society which is a **Member Society of the Technical Council.** It is suggested that more than the specified number of names and signatures be included to ensure that all petitioners qualify, thus speeding the petition's processing.

Note: In the bullets above, the information in parentheses is provided as an example only. You will need the specific information for your region.

The Petition is an online procedure. You will need the email addresses for a minimum of 12 IEEE members in your Geographic Parent region and you can electronically route the electronic Petition for electronic signatures. Consider more than 12 signatures to ensure that all petitioners qualify. Your petition should be completed with the following information prior to sending it to the signers.

- In addition, you will need to **complete a business plan** that includes mission/goals, planned meetings and activities for first 6 months. (See page 4)
- You will also need **written approval of the Geographic parent Executive committee**. (See page 5). The completed petition shall be submitted to the Geographic parent Executive Committee for approval, prior to submission to the Member and Geographic Activities (MGA) staff.

What happens next? MGA staff will review the petition and work with the organizer to resolve any discrepancies. The Chapter will be considered established after Member and Geographic Activities have ascertained that the Regional Director and the Society/Technical Council President(s) have no objections to the formation of the Chapter.

Following approval, the Section Chair, the Chapter Organizer, the Regional Director and the President of the Society/Technical Council will be notified. The Chapter formation will be noted in the Report of the Managing Director at the next meeting of the Member and Geographic Activities Board.

TO FORM A JOINT CHAPTER OF 2 OR MORE CONTIGUOUS SECTIONS

A petition must be signed by a minimum of twelve (12) voting members of the Sections involved, who are members of the Society or Societies, and submitted for approval by the pertinent Sections Executive Committees. It is suggested that more than the specified number of names and signatures be included to assure that all petitioners qualify, thus speeding the process of the petition.

In addition to the items required for forming a single Section chapter, the petition must include:

- The names of the Sections involved
- The name(s) of the Society or Societies/Technical Council
- The name and address of the Chapter Organizer
- The organizational unit (administrative parent Section) which shall be responsible for the Chapter's management. (In joint Chapters, administrative matters relate to the parent Section.)
- Written approval of the entities involved

The Joint Chapter shall be considered established after MGA has ascertained that all entities involved have no objections to the formation of the Chapter.

Following approval, the Sections and Societies/Technical Council involved, the Chapter organizer and the Regional Director will be notified. The Chapter formation will be noted in the Report of the Managing Director at the next meeting of the MGA Board.

The following Section 2 is to provide examples of an actual petition.

Section 2: Example from an actual petition (business plan and proposed activities for a Section / Joint chapter)

Business Plan

1. What was the motivating factor that led to forming this geographic unit? What member needs will be fulfilled as a result of forming this unit?

Precision health represents a transformative approach in healthcare, leveraging advanced smart technologies to tailor medical treatments to individual patient characteristics. Central to this paradigm are MedTech innovations, which include cutting-edge devices and software that enhance diagnosis, treatment, and monitoring. Biosensors play a critical role in this ecosystem, enabling real-time health data collection and remote patient monitoring. By continuously or monitoring or at point-of-carer measurement of biomarkers, these biosensors provide actionable insights that empower patients and healthcare providers to make informed decisions, ultimately leading to more effective, personalized care. Together, these elements of precision health promise to revolutionize how we understand and manage health and disease. Many therefore have suggested that MedTech and Biosensors and Precision Health are intertwined. The importance of this ecosystem is also pronounced in market studies, which estimated the global biosensors market size in terms of revenue to be worth USD 27 billion in 2022 and is poised to reach USD 58 billion by 2032, growing at a CAGR of 8.3% from 2019 to 2032. About 30% of all these actions is happening in North America. Twin cities is believed to play a critical role in this eco-system as the leaders of the MedTech (Medtronic and Medical Alley), many biosensing companies and start-ups and university of Minnesota with close connections to the major players in this market are all located here. There are several societies, chapters and affinity groups linked with IEEE, but at this point, the links between MedTech and Precision Sensing seems underrepresented. At the same time, despite the location of a large number of biosensing research institutes, companies and start-ups in the region, there are not many IEEE societies in this region. This points out the need for a new chapter that will allow for better interdisciplinary coverage of MedTech and Precision Sensing topics. IEEE R4 region, Twin Cities Chapter and IEEE Sensors Councils are informed, are kindly supporting this new technical council chapter.

2. List the activities the unit will focus on for the first six months. What activities will engage the members of the unit with one another?

The primary activity of the Twin Cities Precision Sensing Chapter will be the planning, supporting and presentation of Technical Meetings with inter/multidisciplinary coverage of the following topics but not limited to: 1. Wearable Health Devices 2. Telemedicine and Remote Patient Monitoring 3. Personalized Medicine 4. Biosensors and Microfluidics systems 1. Design, modeling, simulation, analysis, materials, processes, characterization, assembly, packaging, reliability testing of Sensors/Microfluidic systems and integrated technologies 2. Various types of (Bio)sensors, (Bio)MEMS, microfluidic systems 3. Fields of applications in (Bio)sensors, (Bio)MEMS, microfluidic systems 5. Artificial Intelligence and Big Data in Diagnostics 6. Digital Therapeutics 7. Drug Delivery and Targeted Therapies 8. Regulatory Challenges: Navigating regulations for new MedTech innovations. 9. Data Governance (Data Integrity, security, sensing & Blockchain in Healthcare) 10. Point-of-Care Testing: 11. Integration of IoT in Healthcare: The role of the Internet of Things in patient care. 12. Augmented Reality and Virtual Reality 13. 3D Printing in Medicine

3. What accomplishments will this unit strive to meet in its first year?

During the first year (2025), the committee will organize (bi-)monthly meetings and hopefully a workshop. The long-term goal is to host IEEE Sensors/IEEE BioSensors Conference. The idea behind these meetings to invite leaders in the field from around the globe and showcase the innovative and cutting-edge advancements in the field and discuss the dynamic intersection of technology, healthcare, and patient-centered care.

4. What level of local support is engaged in support of the unit activities?

The unit will benefit from the network and close relation of its core volunteers with the leaders and researchers from University of Minnesota, International Institute for Biosensing, Medtronic, and Medical Alley. This network will help support the formation of the unit, facilitating the activities and lectures to be organized through this chapter. The officers would like to request start-up funds of $1000 to help fund the meetings and the invitation of the speakers in the first year. These funds could be provided by the IEEE twin Cities Sections, IEEE Sensors Council or a shared contribution by both. As for the coming year, the plan is to charge a fee for the meetings/workshops or profit from our connections with the university and companies so that they would sponsor the event and through this we hope to reach a positive and growing budget

Guidelines to open a student chapter

- ***If you want to create a Student Chapter with multiple parent societies and councils, ask yourself how you will manage the interaction with that many organizational units.***
- ***Get in touch with your section before creating a student branch chapter and get advice from them how student branch chapters work and interact with the section. Do this exercise before opening a petition.***
- ***Please note that the funding possibilities from the Sensors Council are limited. Think of additional ways to obtain funding for your events.***
- ***All chapter activities will be funded on submission of bills and report of event***

Example from an actual petition (business plan and proposed activities for a Student chapter)

a. If the Student Branch Chapter is approved, how and when will the election take place to complete the branch committee (vice-chair, treasurer and secretary)? *

If the Student Branch Chapter is approved, elections will take place within one month of approval. The founding members will organize the election process, ensuring transparency and fairness. Voting will be conducted online to maximize student participation, with nominations for vice-chair, treasurer, secretary and publicity lead positions being accepted during the first two weeks. The final election will be held in the third week, with results announced shortly after.

b. What activities (seminars, competitions, etc.) do you have planned for your Student Branch Chapter (if approved.) Have you already had any activities in your Institute that you would like to continue under your Technical Society? *

The IEEE Sensors Council student branch at Multimedia University of Kenya will plan to organize seminars, workshops, competitions, and guest lectures to enhance learning in sensor technologies. Activities will include hands-on workshops with Arduino and Raspberry Pi, annual sensor design competitions, and hackathons. The student branch will support collaborative research projects, and industry visits. Networking events and

community outreach programs, such as STEM workshops and sensor-based sustainable development projects, will be key focuses. Existing initiatives, like IEEE seminars and the annual tech and innovation symposium, will continue under the branch. Overall, the branch aims to provide practical experience, professional development, and community engagement in sensor technologies.

c. What plans are in place to keep the Student Branch Chapter active, and the chapter members and committee officers involved? *

To maintain an active and engaged IEEE Sensors Council student branch at Multimedia University of Kenya, we plan to hold regular meetings, workshops, and seminars focused on sensor technologies. Leadership development through workshops will empower committee officers, with roles rotated to diversify skills. Collaborations with other IEEE branches and local industry will enrich events and networking opportunities. A mentoring program will integrate new members, while feedback mechanisms and strategic planning ensure sustainability. Recognizing member achievements and leveraging digital platforms will enhance participation. Our goal is a dynamic IEEE Sensors Council student branch that enhances academic and professional growth at Multimedia University of Kenya.

d. What plans are in place to keep the Student Branch Chapter self-sustaining? How will the funding for activities and events be managed? *

To ensure sustainability, the IEEE Sensors Council student branch at Multimedia University of Kenya will plan to fund activities through sponsorships from industry partners, and grants from organizations like IEEE and others that are aligned with our goals. We'll also have collaborations with other university groups and partnerships with local IEEE chapters and industries which will expand our funding opportunities. Detailed budgeting will guide our expenditure and the Student Branch's spending, ensuring transparency. We'll also have a long-term sustainability plan focusing on increasing membership, enhancing engagement, and diversifying funding to foster continued growth and impact.

e. What are your plans to increase the Student Branch Chapter membership within the first year, following approval? Please describe how your Institute plans to support the Student Branch Chapter. *

To establish a dynamic IEEE Sensors Council student branch at Multimedia University of Kenya, we have devised comprehensive plans to enhance membership and secure institutional backing. Our strategy includes initiating extensive awareness campaigns through orientation sessions, workshops, seminars with industry experts, and leveraging social media platforms to engage students. Collaborating closely with existing IEEE chapters and forging partnerships with local industries will enrich our offerings, providing access to technical competitions, resources, and networking opportunities in sensor technology. Ensuring robust engagement and retention, we plan regular meetings, feedback mechanisms, and recognition of member contributions.

f. One of the common challenges a Student Branch Chapter faces is its relationship with its two "Parents": The Section and the Society. How do you plan to develop and maintain a collaboration with these parental units? *

The student branch at Multimedia University of Kenya will plan to establish strong ties with the IEEE Kenya Section and IEEE Sensors Council Kenya Chapter for its new IEEE Sensors Council Student branch chapter. Key strategies include regular communication and meetings with both entities to seek guidance, align activities, and leverage resources. We aim to enhance visibility through joint events, acknowledge support in communications, and gather feedback to improve collaboration. Long-term sustainability is emphasized through succession planning and exploring broader partnerships within the IEEE network. These efforts are geared towards fostering a supportive environment for promoting sensor technology among members and the university community.

If you need any assistance and help in opening a SC chapter, please contact the chair of Chapter Engagement Committee (CEC) Dr. Veda Sandeep at veda.sandeep@tyndall.ie