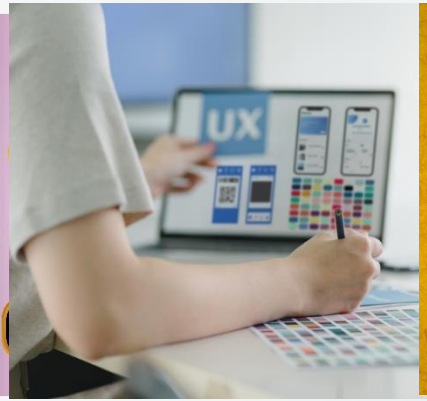
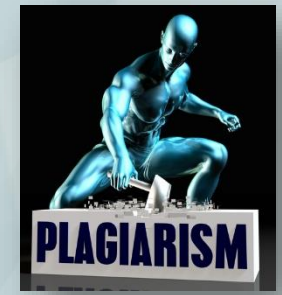



Plagiarism Screening, Machine-generated papers, AI Papers & Reviews, Tortured Phrases/Papers



Region 10 - Conference Leadership Workshop
John Barr – IEEE Conferences Committee Chair
9 July 2025

Presentation 1 of 3 - Technical Program Management

IEEE
Advancing Technology for Humanity

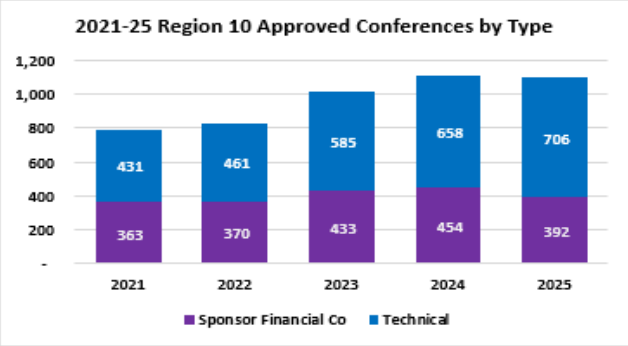
Agenda

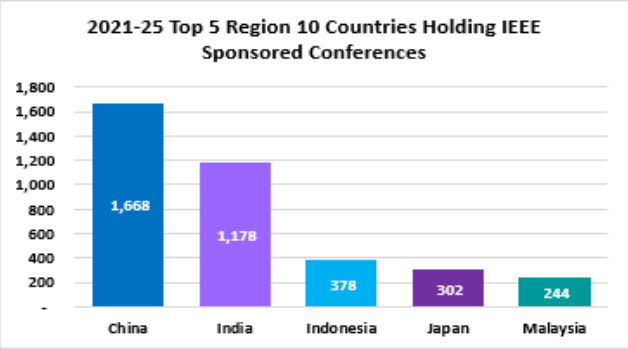
- Region 10 Conference Portfolio Overview
- Crosscheck
  - Plagiarism Screening
- Machine-generated Papers
- AI Papers & Reviews
- Tortured Phrases/Papers
- Addressing the Conference Threats
- Addressing Peer Review Concerns
- Technical Program – Best Practices

IEEE Conferences, Events & Experiences Activity Report

Prepared for 2021-2025 Region 10 Conferences, May 2025

- IEEE Sponsored/Co-Sponsored Events in Region 10





Top 10 Region 10 Countries with the Greatest Actual Papers Per Conference

Country	Actual Papers Number	Avg Papers /Conference
Maldives	878	293
Nepal	2,442	222
Singapore	14,277	181
Korea (South)	19,002	176
India	158,886	170
China	207,231	168
Fiji	635	159
Philippines	888	148
Japan	30,953	126
Bangladesh	6,238	118

Top 10 Region 10 Conference Locations by Final Income*

Country	# of Conferences	Final Income - Total Amount.
China	1,668	$28,058,978.70
Japan	302	$16,951,111.27
Korea (South)	139	$11,590,372.26
Singapore	102	$11,579,027.35
Australia	181	$8,006,676.33
Malaysia	244	$6,241,581.95
India	1,178	$5,515,389.20
Taiwan	137	$4,473,921.69
Thailand	140	$2,023,638.83
Indonesia	378	$1,495,958.18

*Income only reported for those conferences with Budget Required Flag='Y'.

Top 10 Region 10 Conference Locations by Avg. Conference Attendance

Country	# of Conferences	Estimated Attendees	Avg Attendees
Pakistan	92	41,275	449
Bangladesh	56	21,150	378
Korea (South)	139	47,925	345
Japan	302	95,839	317
Maldives	5	1,500	300
India	1178	346,037	294
Singapore	102	29,202	286
Taiwan	137	35,540	259
Cambodia	1	250	250
China	1668	408,540	245

IEEE Conferences Events & Experiences

Region 10

- Top IEEE OUs Sponsoring Conferences in Region 10:

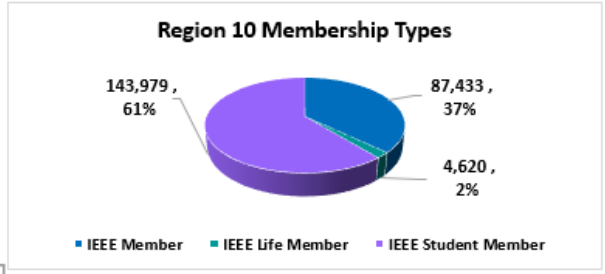
IEEE OU	# of Conferences
IEEE Computer Society	434
IEEE Systems, Man, and Cybernetics Society	185
IEEE Power & Energy Society	172
IEEE Robotics and Automation Society	170
IEEE Communications Society	163
IEEE Industry Applications Society	146
IEEE Industrial Electronics Society	85
IEEE Electron Devices Society	74
IEEE Circuits and Systems Society	66
IEEE Computational Intelligence Society	65

- Top IEEE GeoUnits Sponsoring Conferences in Region 10:

GeoUnits	# of Conferences
Indonesia Section	290
Bangalore Section	203
Nanjing Section	178
Madras Section	175
Beijing Section	145
Guangzhou Section	138
Uttar Pradesh Section	125
Thailand Section	102
Chengdu Section	90
Harbin Section	83

- Top Non-IEEE Entities Sponsoring Conferences in Region 10:

Non-IEEE Entities	# of Conferences
Association for Computing Machinery Special Interest Group on Software Engineering - ACM SIGSOFT	44
Zhejiang University	40
South China University of Technology	31
Southwest Jiaotong University	28
Chongqing University	28
University of Electronic Science and Technology of China - UESTC	27
Guangdong University of Technology	27
ECTI Association	26
Sichuan University	26
Shanghai Jiaotong University - SJU	26



Top 10 Member Countries of Residence

Country	# of Members
India	115,504
China	53,430
Japan	18,336
Australia	8,562
Korea, Republic of	7,752
Taiwan	5,667
Bangladesh	4,412
Sri Lanka	3,696
Hong Kong	3,597
Singapore	3,242

Notable Highlights:

- There are 3,819 approved IEEE-sponsored conferences that have been/will be held in region 10 from 2021-2025.
- ~61% of members in region 10 are Student Members. ~49% of members from Region 10 reside in India.
- The most conferences were held in China, India, and Indonesia.
- Conferences in Maldives produced the greatest average of papers per conference, averaging ~293 papers in 3 conferences.
- Conferences in Pakistan had the greatest average attendance per conference, an estimated 449 attendees per conference.
- IEEE Computer Society is the OU with the most sponsored/co-sponsored Region 10 conferences. Indonesia Section has sponsored the most conferences for GeoUnits, and ACM SIGSOFT has the most sponsorships for Non-IEEE Entities

Standard Challenges

Plagiarism

Do Not Copy Other People's Papers

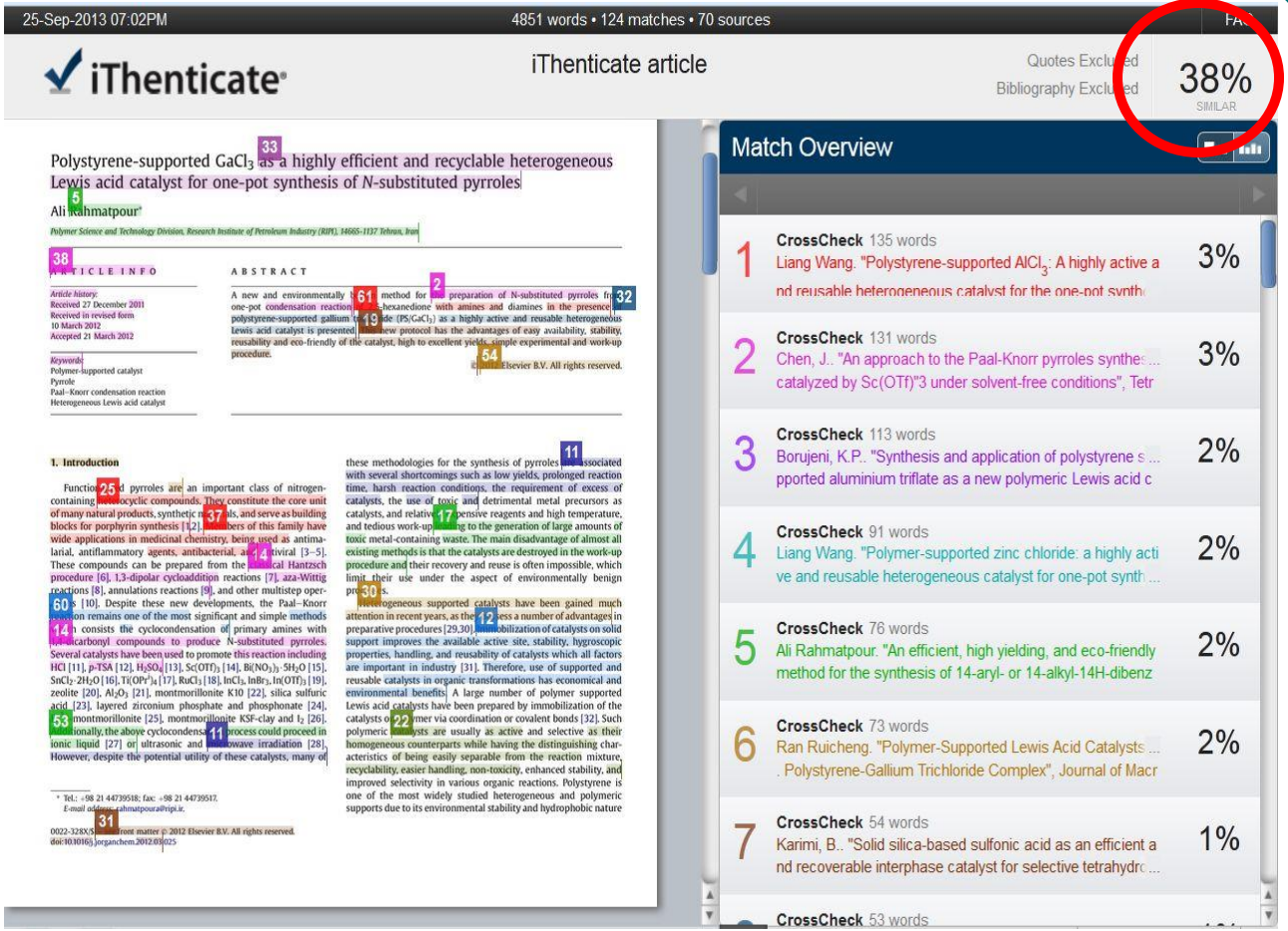
- The work in the paper must be new work
  - Not work that has been published before, even if the authors published the previous work
- The work in the paper must have been performed by the authors of the paper
- The text must be written, and the figures created, by the authors of the paper
- It is okay to include small pieces of work from other papers, but…
  - These pieces must be clearly identified as coming from other places, and citations to the other places must be given

Similarity Check

Sample Similarity Report

Assign resources to assist the Technical Program Chair if necessary – the reports requires a human eye to review and judge.

Each accepted paper must be screened for plagiarism



Similarity Check is Not Peer Review

Requires Interpretation

- The Technical Program Chair manages Similarity Check and plagiarism reviews
  - needs coordination with Publications Chair
- Similarity Check does not replace the peer review process
  - Similarity screening is a separate function from the peer review process
- Subject matter experts must separately review the paper to determine suitability, novelty, quality and communication
- **Similarity scores are just that, they require human review and analysis**
- Similarity scores should not be the only basis for reject (or accept) decisions
  - Similarity score should not be given as feedback to authors
- Similarity Check can be used on IEEE-copyrighted content only

Similarity Check – When to use it?

- Similarity Check must be separate from the Peer Review process
- Options
  - Screen all papers before peer review
  - Screen accepted papers immediately after peer review
  - Screen papers in parallel with peer review (not ideal)
  - Screen papers after the conference (only as a last resort)

IEEE

Machine Generated Papers

- There are some computer programs that can generate something that resembles a scientific paper
  - However, what they produce is a pseudo-random collection of words and phrases that often appear in scientific papers
- Submitting such a paper to an IEEE conference is considered to be a very serious offense
  - Can result in the author(s) being prohibited from publishing in *any* IEEE publication

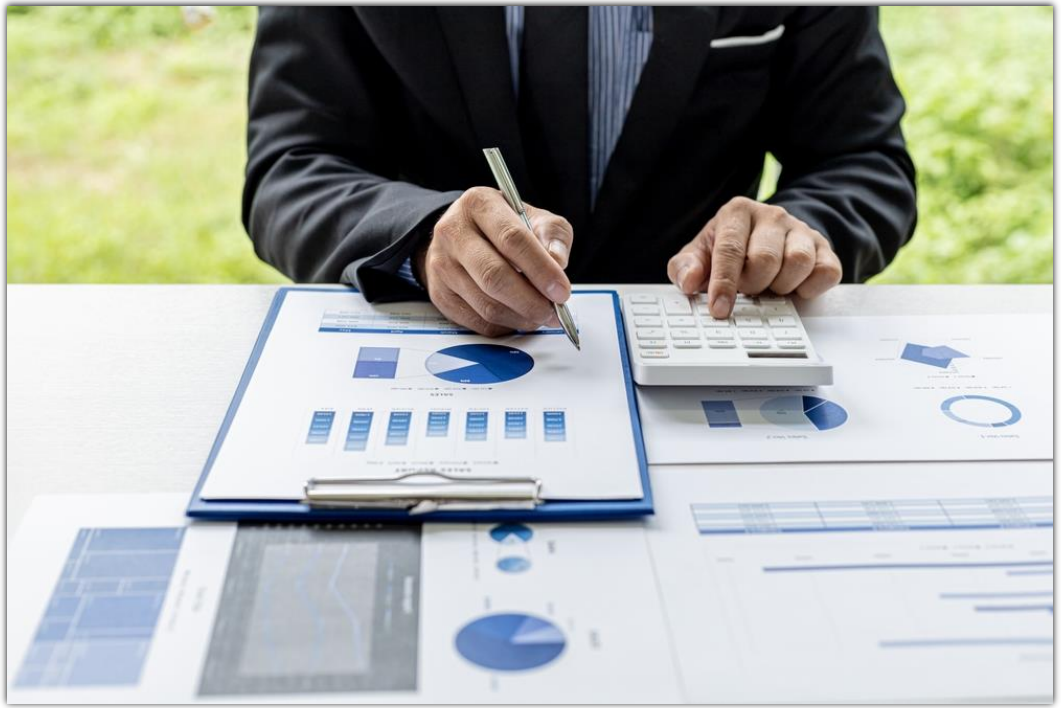
Proper References

- Previous work, both by the authors and by others, should be acknowledged and cited
- The number of references should be appropriate — not too many and not too few
  - Too few ⇒ other people's work is ignored
  - Too many ⇒ "citation stacking" (artificially increasing the number of times those papers are cited)
- Each reference should be "complete" — have enough information that others can find a copy of the work referenced
- All references should be properly formatted

IEEE

Illegible Figures

- Make sure that people can read and understand your figures, diagrams, graphs, tables, and other data
- Fonts should be large enough to be legible, the layout of diagrams and graphs should be clear, and figures should be high resolution (≥300 dpi)



New Challenges

Generative AI

- The next generation of machine-generated papers
- Such as ChatGPT, OpenAI tools, Google Bard, Gemini, …..
- Much better natural language and creates more realistic-looking papers (but not original content – yet)
  - Reads well
  - More coherent thesis
  - Meaningful references
  - Occasional hallucinations – totally made-up content
- Getting more difficult to detect, but a true human subject matter expert can detect BUT weak peer reviewers will miss.

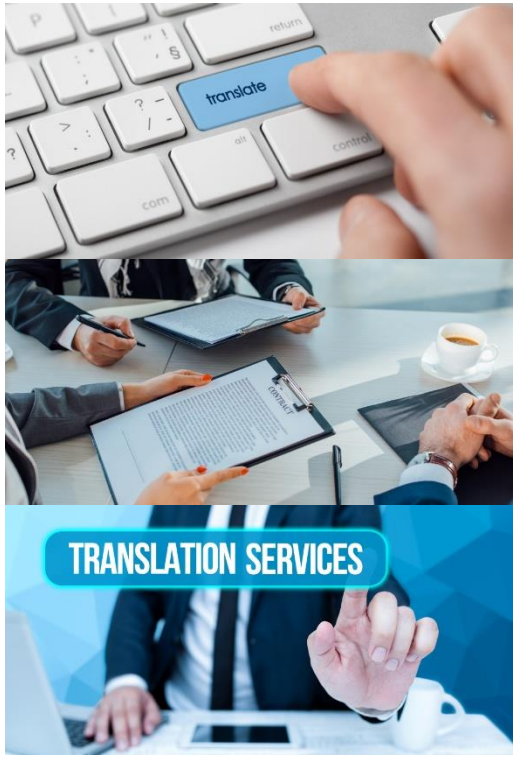
Tortured Phrases/Papers

- Tortured Phases is the use of non-standard language or convoluted expressions for standard, well-accepted terms
- Causes?
  - Authors with poor mastery of English or lack of familiarity of standard terms
  - Weak (word-by-word) language translators
  - Deliberate text modifications to avoid plagiarism detection *(principal cause?)*
- Examples *Glucose Intolerance –> Sugar Bigotry, Big Data –> Huge Information*
- While around for years, the first broad acknowledgment was in 2021
  - Cabanac, Guillaume, Cyril Labbe, and Alexander Magazinov. ”Tortured phrases: A dubious writing style emerging in science. Evidence of critical issues affecting established journals.” arXiv preprint arXiv:2107.06751 (2021)
- By 2024, has grown by at least 10x
- Common in all scholarly publishing, not just IEEE or engineering.

Tortured phrases	Expected text	Total of the occurrence numbers
information mining	data mining	890
recognizable proof	identification	467
profound learning	deep learning	458
informational collection	data collection	443
vitality utilization	energy use	441
informational index	dataset	424
information science	data science	422
distinguishing proof	identification/verification	420
choice tree	decision tree search	415
huge information	big data	345

2021 Analysis

Poor English and “Google Translate”



- The language in the paper should be “correct” — there should not be many grammar, spelling, and punctuation errors, as they make the paper difficult to read or understand
- Translation software, such as Google Translate, makes many errors. Using software to translate large portions of a paper often results in an unreadable paper.
- If you need to have large sections of your paper translated, it should be done by a qualified person
- Authors are responsible for the translated content
- Readability issues are sufficient for rejection

Other Threats

- Additional result of the pressure of “Publish or Perish” / graduation requirements / academic institution accrediting requirements
  - Citejacking – non-existent / non-related references
  - Feet of Clay – Based on fraudulent / retracted / withdrawn papers
  - Falsified data / reversed engineered data
  - Papers Mills – very hard to detect, probably more common than we realize

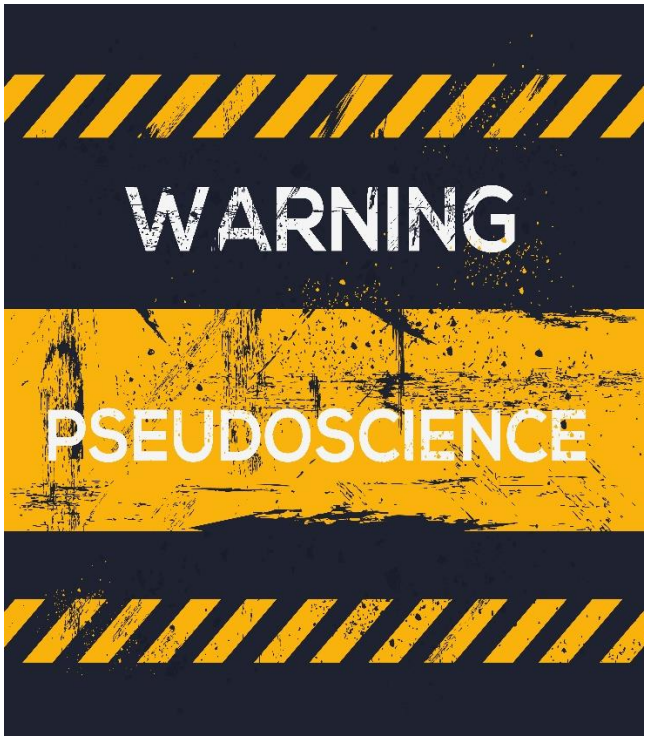
- Robust Peer Review with Subject Matter Experts is essential, but some automation may help
- Building a strong Peer Review team is one of the primary responsibilities for the Technical Program Chair(s)

IEEE

Addressing the Conference Threats

- While the vast, vast majority of IEEE submissions are valid, with 300,000 annual conference presentations and > 500,000 submissions, if just 1-2 per 1,000 problematic papers leak through this results in too much junk
- Investigation is showing
  - The bulk of the issue is occurring in a small number of conferences, but an occasional problem can be found in many conferences
- Using newly developed third-party tools:
  - Xplore is being scanned, and papers are being retracted
  - Conferences with repeated history, their next Xplore submission will be pre-scanned and if problems are found, returned with a warning that they must clean-up their submission and provide a roadmap to prevent future issues.
  - IEEE owners / sponsors with repeated events will likewise be warned as Policy 10 requires that they are substantially involved in the organization of the technical program.

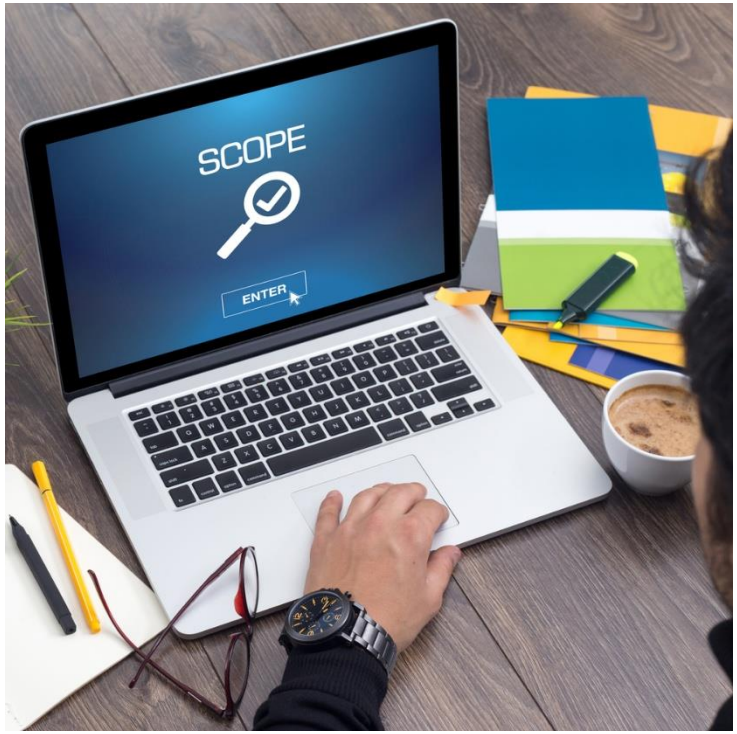
Pseudoscience



- Reviewers should **not accept papers on pseudoscience** — topics that present themselves as scientific but are of dubious scientific validity
- Examples of such topics include perpetual motion, auras, dowsing, chakra points, homeopathy, morphic resonance, and torsion fields
- In many cases, these papers are outside of the reviewers' areas of technical expertise, so the reviewer should not review them

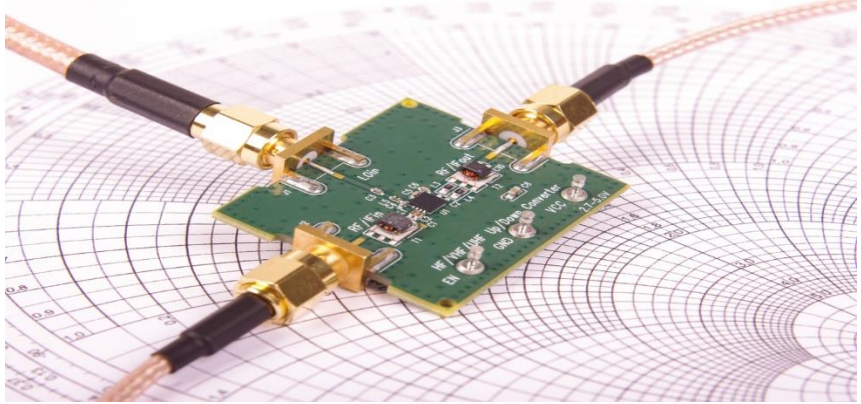
IEEE

Conference Scope



- Reviewers should make sure that the **scope of the papers that they review are within the stated scope of the conference**
- Papers that are outside the scope of the conference should be rejected

Reviewer Expectations



- Reviewers need to be experts in subjects of the papers that they review
- They provide a high-quality review and evaluation of the technical content
- They review and evaluate the presentation quality of the papers
- They are unbiased
- They make sure that the authors have met their responsibilities

Expert Evaluation of Submitted Papers

IEEE

Too Many Authors or Reviewers From Host Institution

- Having a large fraction of the accepted papers are from the institution that hosts the conference gives a negative impression
  - Organizers discriminating against other institutions?
  - Conference can't attract many authors?
  - Conference is designed only for members of that institution?
- Carefully monitor the number of papers and fraction of reviewers from the host institution!
- It is a Conflict of Interest to review colleagues' / students' submissions

Template Text

- Many conferences provide authors with a “template” that helps authors format their manuscripts correctly
- Standard IEEE conference templates for Word, LaTeX and Overleaf exist
- Authors should check their papers carefully to make sure they have removed all of the template text
  - **Leftover template text in papers makes it appear very unprofessional for both authors and reviewers! And of course, for the conference organizers!!**

IEEE

Addressing Peer Review Concerns

- **New IEEE Requirements**
  - All conferences seeking to be included in Xplore **must** fully implement the IEEE Peer Review process as defined in IEEE PSPB Operation Manual 8.2.2
  - All conferences seeking to be included in Xplore **must** permit the IEEE with access to their Peer Review data

- ICC / CEE are investigating recommending a Manuscript Handling System(s) that will minimize the impact of these new requirements on conferences
  - Include working with common present MHS providers
  - Looking at free / low-cost options for those not using an established system
  - Will develop ways to collect data from established conferences

Technical Program – Best Practices

- The Technical Program is the heart of the conference
- The Technical Program Chair is responsible for developing and executing a high-quality technical program
- Each submitted paper should receive a minimum of three (3) reviews, no less than 2 (not including a review by Technical Program Chair(s))
- Reviewers should not be assigned more papers than they can reasonably review
- Plagiarism checking is required (by Technical Program Chair)
- If you need assistance, please contact Customer Relationship Management Team
- The integrity of the IEEE and Xplore is the responsibility of ALL.

Q & A