IEEE TRANSACTIONS ON
COGNITIVE COMMUNICATIONS AND NETWORKING

A PUBLICATION OF
THE IEEE COMMUNICATIONS SOCIETY
THE IEEE SIGNAL PROCESSING SOCIETY

IEEE ComSoc TCCN Meeting

9:00 – 10:30am (GMT-4)|Virtual Meeting| May 30, 2024

https://www.comsoc.org/about/committees/technical-committees/cognitive-networks

IEEE Transactions on Cognitive Communications and Networking

▸ **Launched in 2015**

- **Cosponsored by IEEE Communications and Signal Processing Societies**
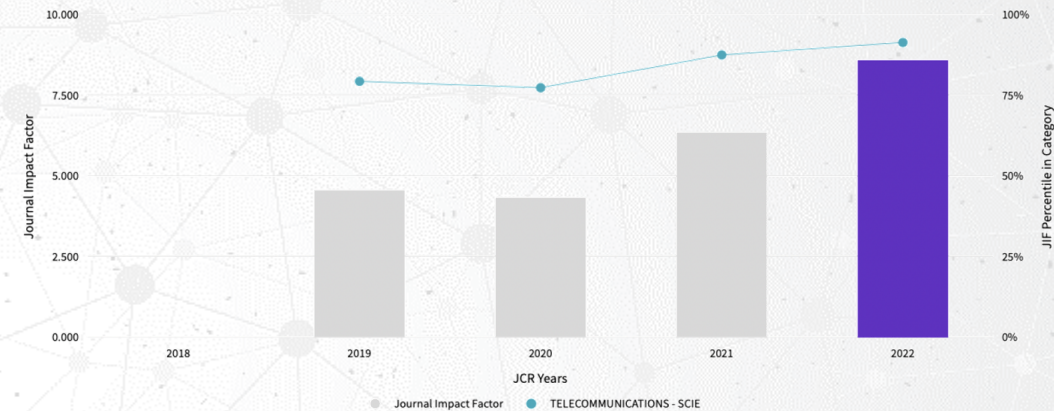
▸ **EiCs**

- **Michele Zorzi, University of Padova, Italy, 2015-2018**

- **Ying-Chang Liang, University of Electronic Science and Technology of China, China, 2019-2022**

- **Shiwen Mao, Auburn University, USA, 2023-2024**

▸ **First impact factor in 2019: 4.574 ➜ 8.6**

▸ **Ranked 8/88 in Telecommunications**

▸ **New Impact Factor will be received in June**

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Journal Impact Factor Trend 2022

EDITION

Science Citation Index Expanded (SCIE)

CATEGORY

TELECOMMUNICATIONS

8/88

JCR YEAR	JIF RANK	QUARTILE	JIF PERCENTILE	
2022	8/88	Q1	91.5	
2021	12/93	Q1	87.63	
2020	21/91	Q1	77.47	
2019	19/90	Q1	79.44	

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Scope and Areas

Scope: The IEEE Transactions on Cognitive Communications and Networking (TCCN) is committed to timely publishing of high-quality manuscripts that advance the state-of-the-art of *cognitive communications and networking* research. The focus of the Transactions will be on "cognitive" behaviors in all aspects of communications and network control, from the PHY functions (including hardware) through the applications (including architecture), and in all kinds of communication networks and systems regardless of type of traffic, transmission media, operating environment, or capabilities of communicating devices.

AI/ML + Spectrum

Area 1
Cognitive Radio

Area 2
AI-empowered Communications

Area 3
AI-empowered Networking

Area 4
AI-empowered Resource Management

2024 Editorial Board

Cognitive Radio (10)

- Gaojie Chen
- Haichuan Ding
- Nada Golmie
- Zan Li
- Ruizhe Long
- Jules M. Moualeu
- R.R. Venkatesha Prasad
- Mubashir Rehmani
- Francesco Restuccia
- Chee Wei Tan

AI-empowered Communications (14)

- Ahmed Alkhateeb
- Christina Chaccour
- Pingyi Fan
- Chia-Han Lee
- Le Liang
- Yuanwei Liu
- Feng Lyu
- Dola Saha
- Long Shi
- Li Wang
- Zhenyu Xiao
- Jie Xu
- Liang Zhou
- Zhengchun Zhou

AI-empowered Networking (14)

- Xianfu Chen
- Lisandro Z. Granville
- Long Bao Le
- Tom H. Luan
- Kaoru Ota
- Avinash Srinivasan
- Celimuge Wu
- Jing Yang
- Qiang Ye
- Baoxian Zhang
- Ning Zhang
- Jun Zheng
- Zhongyuan Zhao
- Nizar Zorba

AI-empowered Resource Management (14)

- Melike Erol-Kantarci
- Yaru Fu
- Guangjie Han
- Jiawen Kang
- Jun Luo
- Liping Qian
- Dusit Niyato
- Danda B. Rawat
- Yalin Sagduyu
- Yi Shi
- Chun-Wei Tsai
- Zehui Xiong
- Wenchao Xu
- Jun Zhao

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Retired Editor

Cognitive Radio (5)

- Gregory D. Durgin
- Wei Feng
- Yue Gao
- Yiyang Pei
- Yonghong Zeng

AI-empowered Communications (4)

- Guoru Ding
- Dinh Thai Hoang
- Jia Liu
- Zhijin Qin

AI-empowered Networking (2)

- Jiajia Liu
- Kai Zeng

AI-empowered Resource Management (3)

- Tao Chen
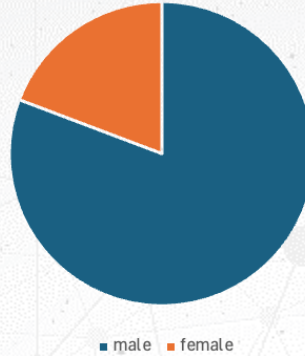- Kae Won Choi
- Li-Chun Wang

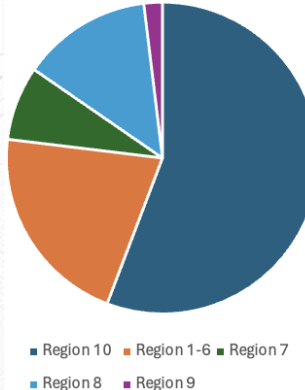# Statistics of the Editorial Board

- **Gender distribution**
  - Male: 80.77%   (42/52)
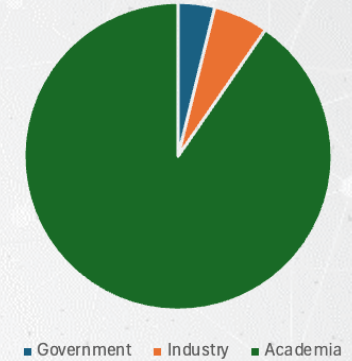 - Female: 19.23%   (10/52)

- **Regional distribution (IEEE regions)**
  - Region 10 (Asia Pacific): 55.77%
  - Region 1-6 (US): 21.15%
  - Region 7 (Canada): 7.69%
  - Region 8 (Africa, Europe, Middle East): 13.46%
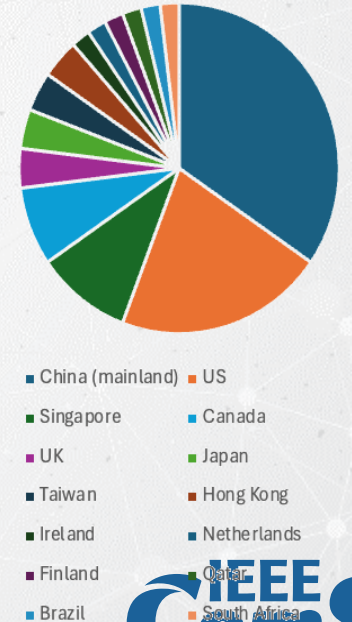 - Region 9 (Latin America): 1.92%

■ male ■ female

■ Region 10 ■ Region 1-6 ■ Region 7
■ Region 8 ■ Region 9

- **Sector distribution**
  - Academia: 90.38%
  - Industry: 5.77%
  - Government: 3.85%

■ Government ■ Industry ■ Academia

- **Country distribution**
  - China: 18 editors
  - USA: 11 editors
  - Singapore: 5 editors
  - Canada: 4 editors
  - UK: 2 editors
  - Japan: 2 editors
  - …

■ China (mainland) ■ US
■ Singapore ■ Canada
■ UK ■ Japan
■ Taiwan ■ Hong Kong
■ Ireland ■ Netherlands
■ Finland ■ Qatar
■ Brazil ■ South Africa

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Submission Statistics

‣ Number of Submissions: Jan. 1, 2024 – Apr. 27, 2024 (~ 55% increase as compared to the same period of 2022 (240 in total))

Manuscript type	Original	Revised	Total
Special Issue: Generative AI for Next-Generation Networks and Communication: Challenges and Solutions	4	0	4
Special Issue: Symbiotic Communication: When Backscatter Communications meet Cognitive Radio in the era of IoT	31	0	31
Transactions Paper Submissions	231	106	337
Total	266	106	372

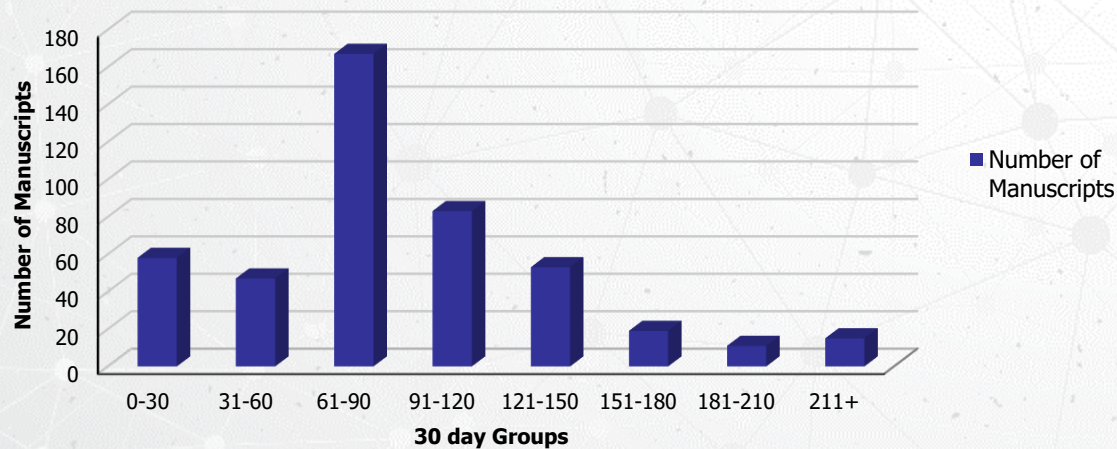‣ Number of submissions per year for 2021 – 2023 (44.5% increase in 2023)

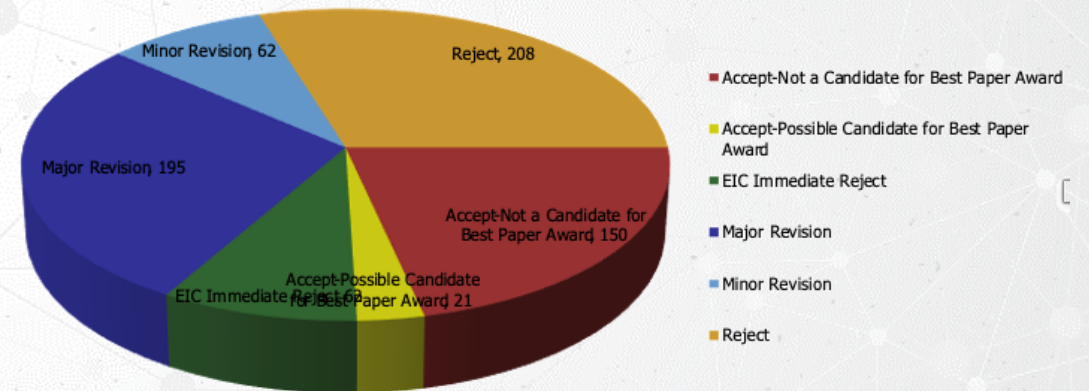| Year	Original	Revised	Total
2021	366	188	554
2022	352	191	543
2023	508	277	785

Submission Statistics

▸ Average time for first decision (April 2023 – March 2024)

- Average days: 89.42 days

▸ Acceptance ratio

- 40.52% (171/422) ➔ **Target: 35%**

▸ Worst-case delayed paper now

- 332 days to close

Number of Days from Submission to Decision

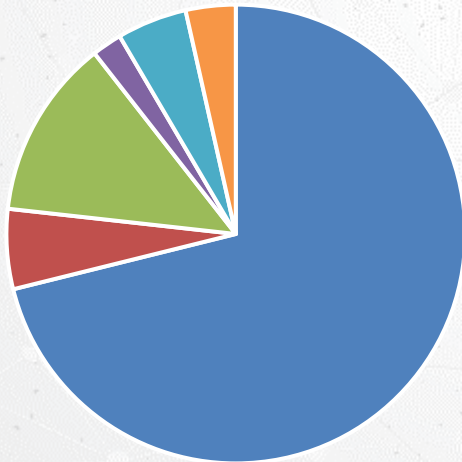**Decision Ratio By Manuscript Type, # Manuscripts**

Legend:
- Accept-Not a Candidate for Best Paper Award
- Accept-Possible Candidate for Best Paper Award
- EIC Immediate Reject
- Major Revision
- Minor Revision
- Reject

Number of Papers per Country

▸ **Number of papers submitted**

- China: 241

- India: 44

- United States: 40

- Korea: 16

- UK: 16

- Canada: 11

▸ **Number of papers accepted**

- China: 101 (41.91%)

- India: 8 (18.18%)

- United States: 18 (45%)

- Korea: 3 (18.75%)

- UK: 7 (43.75%)

- Canada: 5 (45.45%)

China · India · United States · Korea · United Kingdom · Canada

China · India · United States · Korea · United Kingdom · Canada

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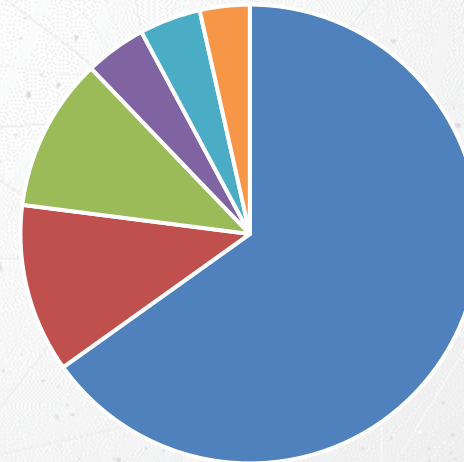
Sub-to-pub Time

Metrics

Submission-to-ePublication for Q4 2023

Average weeks	**36.3**
Median weeks	**32.8**
Number of Articles	**41**

Need to speed up our review process!

Special Issues

▸ **Symbiotic Communication: When Backscatter Communications Meet Cognitive Radio in the Era of IoT**

- First-round review is completed

- 31 valid submissions, 14 Major Revisions after Round 1 (45.16%)

▸ **Generative AI for Next-Generation Networks and Communication: Challenges and Solutions**

- Manuscript Submission: 1 July 2024

- First Review Round: 1 October 2024

- Revision Papers Due: 15 November 2024

- Acceptance Notification: 30 December 2024

- Final Manuscript Due: 30 January 2025

- Publication: 2025

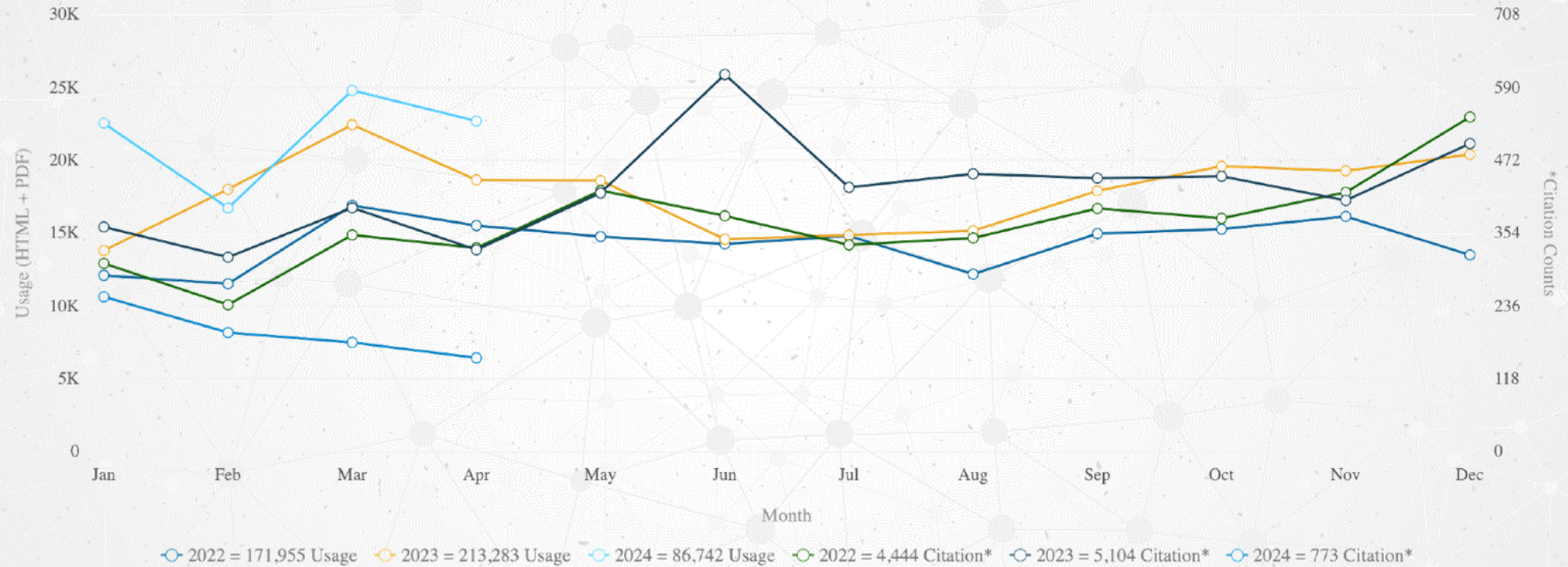- 4 submissions already as of end of April 2024

Invited Paper:

▸ Generative AI for Physical Layer Communications: A Survey (Dusit Niyato's group)

IEEE Xplore Statistics

IEEE Transactions on Cognitive Communications and Networking
Total Usage for Jan 2022 – Apr 2024

Legend: 2022 = 171,955 Usage; 2023 = 213,283 Usage; 2024 = 86,742 Usage; 2022 = 4,444 Citation*; 2023 = 5,104 Citation*; 2024 = 773 Citation*

- Expected downloads in 2023: 213,283, 41,328 (24.03%) increase over 2022
- Citation numbers have not settled down yet, 660 (14.85%) increase over 2022 so far

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TCCN Impact Factor

- The impact factor: **8.6** on JCR Report 2022, and **8.0** excluding self-citations

- Ranked **Q1** in Telecommunications (8/88), Artificial Intelligence, Computer Networks and Communications, Hardware and architecture; Among all IEEE publications: 27/170
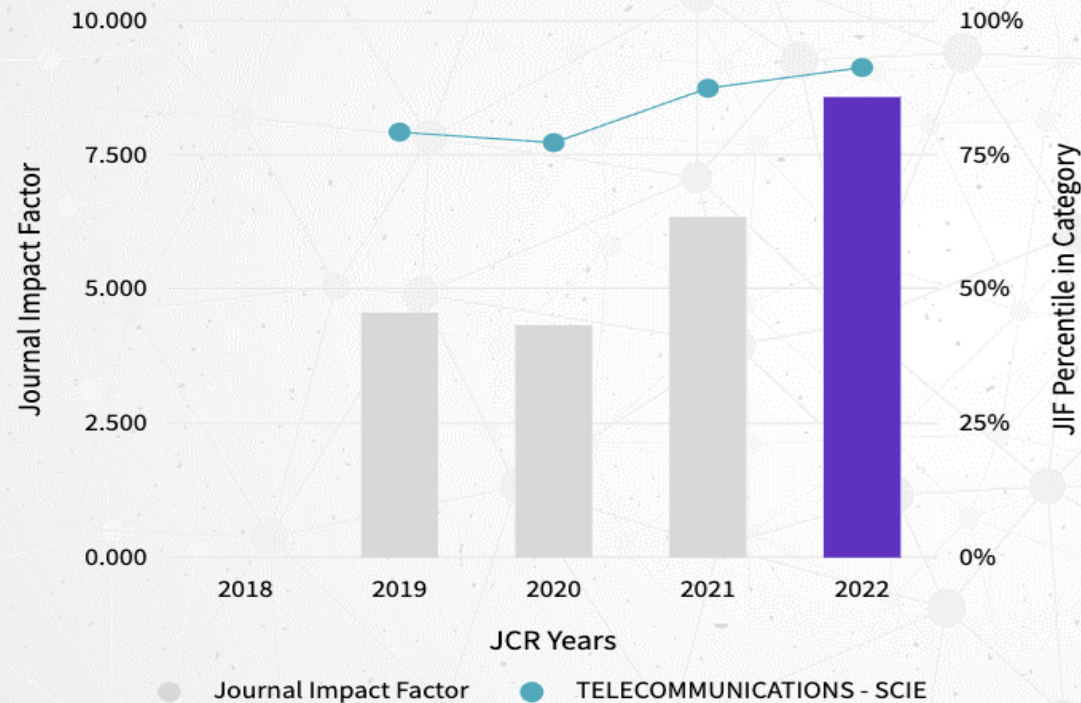
- **TCCN: IF 8.6; CiteScore 12.6**
- TCOM: 8.3; 13.6
- TVT: 6.8, 13.6
- TON: 3.7, 7.9
- **TWC**: 10.4, 16.9
- *TNSE*: 6.6, 8.7
- **IoTJ**: 10.6, 17.4
- *TGCN*: 4.8, 7.2
- *TMBMC*: 2.2, CiteScore 3.8
- TNSM: 5.3, 7.6
- **JSAC**: 16.4, 25.4
- LNET: n/a, n/a
- COMML: 4.1, 7.3
- WCL: 6.3 10.7
- TMC: 4.9, 8.8
- TPDS: 5.3, 9
- TCC: 6.5, 10

- IEEE Trans. on Cognitive Communications and Networking 8.6 6.359 4.341
- IEEE Trans. on Communications 8.3 6.166 5.083
- IEEE Trans. on Wireless Communications 10.4 8.346 7.016
- IEEE Trans. on Vehicular Technology 6.8 6.239 5.978

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More Updates

▸ **The submission portal now is IEEE Author Portal, but the editorial processing is still done in ScholarOne as before**

- **IEEE Author Portal demo: https://drive.google.com/file/d/183s6IupNLyjlFIqjp996-SUyg_z7ZbL2/view**

▸ **Starting 2023, the number of issues has been increased from four to six per year**

- **Backlog greatly reduced**
- **Reduced the publication delay, benefit authors and papers on timely topics**
  - **Aug. 2023 papers to appear in the Dec. 2023 issue**
- **Page budget increased from 1,400 to 1,700: by the Oct. 2023 issue, already used 1414 pages**
  - **Papers get longer: more overlength fees for IEEE**

▸ **About 55% increase in submissions; average load on each AE is still maintained not high**

- **Load balancing when assigning papers, as well as matching the expertise**
- **More AEs: 41 to 52**

▸ **ComSoc enforces stricter term limit for editorial board members of its publications**

▸ **PSPB motion: starting 1 April, new manuscript submissions will no longer be allowed to include the Lena image**

More Updates (cont'd)

▸ **Collaboration with ComSoc Technical Committee on Cognitive Networks (TCCN)**

- *THE* ComSoc technical committee (TC) focusing on cognitive and artificial intelligence (AI) empowered networking research, development, policy making and standardization

▸ **Collaboration with IEEE Communications Magazine**

- Transfer papers that are not good fit of scope

▸ **Conference collaborations:**

- DySpan 2024: fast-track review of few of their top, expended papers

▸ **Integration with IEEE DataPort**

- No cost to TCCN or sponsoring societies for the integration

- Authors have the option to upload their data along with their manuscript when making a submittal

▸ **Integration with CodeOcean**

- A platform where users can share and run algorithms in the cloud

- Authors are provided with instructions on contributing their codes in the acceptance email

- This will avoid potential biases, provide fairness, and finally promote trust in the review process.

▸ **Reviewer invitation email:**

- *"If you do not have a conflict of interest with the authors, such as family relation, research collaboration within the past 5 years, or same affiliation, please click here to accept the review:"*

Policy on AI Generated Content

▸ **Guidance for IEEE Publications Regarding AI-Generated Text**

    - At its February 2023 meeting the IEEE Publication Services and Products Board passed the following motion, to be used as initial guidance by IEEE Publications:

    - "*The use of artificial intelligence (AI)–generated text in an article shall be disclosed in the acknowledgements section of any paper submitted to an IEEE Conference or Periodical. The sections of the paper that use AI-generated text shall have a citation to the AI system used to generate the text*"

    - Effective immediately, Editors-in-Chief should take steps to ensure that relevant author-facing communications such as author instructions on the sponsoring Society/council website

▸ **Need to be careful of AI generated reviews as well**

▸ **IEEE's standing on this issue, but not clear how to enforce the policy**

    - Some similarity check tool can check an AI score

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