How to Write a Quality Technical Paper and Where to Publish within IEEE

Dr. Carlos A. Coello Coello
CINVESTAV-IPN
Av. IPN No. 2508
Col. San Pedro Zacatenco
México, D.F.
Email: ccoello@cs.cinvestav.mx

IEEE
Advancing Technology for Humanity

About the Keynote Speaker

Dr. Carlos Artemio Coello Coello

Professor of the Computer Science Department with the Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico City, Mexico.

- **IEEE Fellow** for *contributions to multi-objective optimization and constraint-handling techniques*. Being a Fellow is the highest distinction granted by the IEEE to its members. No more than one tenth of the 1% of its voting members can obtain this distinction each year.
- Recipient of the **2013 IEEE Kiyo Tomiyasu Award**, "*for pioneering contributions to single- and multiobjective optimization techniques using bioinspired metaheuristics*
- Currently Associate Editor for the following IEEE journals: *IEEE Transactions on Evolutionary Computation*
- Frequent author of many top-cited articles & conference papers
- Has been member of the Evaluating Committee of the National System of Researchers in Area VII (and presided it in 2009).

Topics

- **IEEE Introduction and Background**
- **How to Write a Quality Technical Paper and Where to Publish within IEEE**
- **Next Steps: IEEE *Xplore*® and other author tools**

About the IEEE

- World's largest technical membership association with over 430,000 members in over 160 countries
- Not for profit organization dedicated to "Advancing Technology For Humanity"
- Four Core areas of activity
  - **Membership organization**
  - **Conferences organizer**
  - **Standards developer**
  - **Leading Publisher**

IEEE
Advancing Technology for Humanity

IEEE members and authors are the leaders of today & tomorrow

Thomas
IEEE Meda
20
Algorithms f
processing, tex
video ce

Gordon
EEE Med
20
Leade
uctor indu

Morri
EE Meda
Taiwan S

John Hennessy
IEEE Medal of Honor 2012
President, Stanford University

Irwin Jacobs
IEEE Medal of Honor 2013
Co-founder, Qualcomm, Inc

B. Jayant Baliga
IEEE Medal of Honor 2013
Transformed Power Semiconductors

IEEE
Advancing Technology for Humanity

What we do

- Publish the top-cited science and technology research in the field, most notably our journals, conferences and standards
  - Publish 170 journals, transactions and magazines
  - Sponsor more than 1,300 annual conferences worldwide
  - Leading developer of nearly 1,500 industry standards in a broad range of technologies
  - More than 3.5 million documents in the IEEE *Xplore* Digital Library, with more than 8 million downloads each month
  - Over 300 IEEE educational online learning courses, plus IEEE English for Engineering
  - Publish technical books in all the fields served by IEEE

Mission statement

IEEE's core purpose is to foster technological innovation and excellence for the benefit of humanity.

Many programs, projects and initiatives that IEEE has in place support this mission, including IEEE Author Workshops.

IEEE
Advancing Technology
for Humanity

Why we are here today

- Support the IEEE mission of advancing technology and dissemination of information
  - Enhance the ability of engineers, faculty, researchers, authors, and industry professionals to develop high quality scholarly research papers
  - Help advance the careers of engineers and researchers by enabling them to get published
  - Help authors share and disseminate critical information and emerging innovations with a global community
  - Help authors select the best outlet for their research by choosing the right quality journal in their field

IEEE
Advancing Technology for Humanity

IEEE quality makes an impact

IEEE quality makes an impact

Thomson Reuters Journal Citation Reports® by Impact Factor

IEEE publishes:

19 of the top 20 journals in Electrical and Electronic Engineering

18 of the top 20 journals in Telecommunications

7 of the top 10 journals in Automation & Control Systems

6 of the top 10 journals in Computer Science, Hardware & Architecture

4 of the top 5 journals in Cybernetics

3 of the top 5 journals in Artificial Intelligence

2 of the top 5 journals in Robotics

The Thomson Reuters Journal Citation Reports presents quantifiable statistical data that provides a systematic, objective way to evaluate the world's leading journals.

Based on the 2013 study released June 2014

More info: www.ieee.org/citations

IEEE
Advancing Technology for Humanity

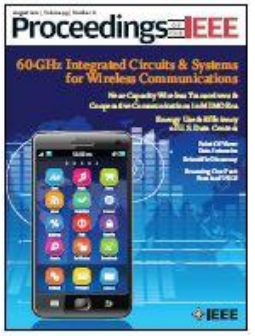
IEEE quality makes an impact

Thomson Reuters Journal Citation Reports® by Impact Factor

IEEE journals are:

- **# 1** in Automation and Control
- **# 1** in Computer Hardware
- **# 1** in Cybernetics
- **# 1** in Electrical Engineering
- **# 1** in Industrial Engineering
- **# 1** in Manufacturing Engineering
- **# 1** in Robotics
- **# 1** in Telecommunications
- **# 2** in Aerospace
- **# 2** in Information Systems
- **# 2** in Imaging Science

Based on the 2013 study released June 2014

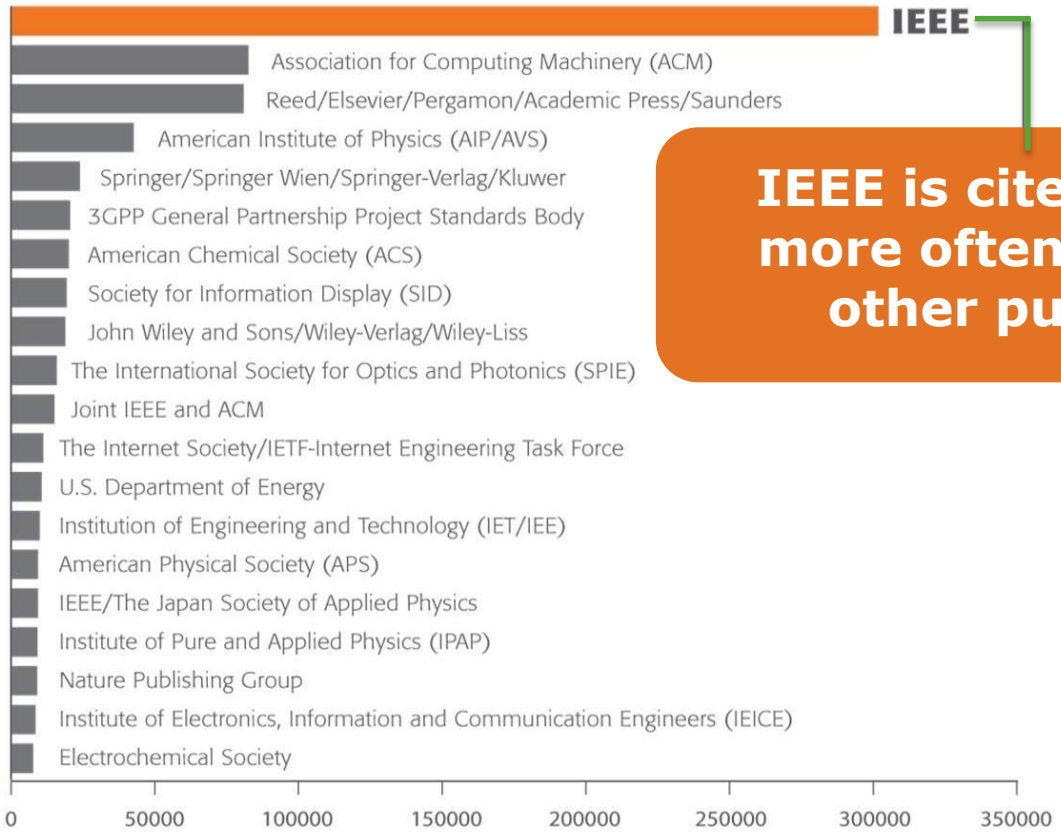


The Thomson Reuters Journal Citation Reports presents quantifiable statistical data that provides a systematic, objective way to evaluate the world's leading journals.

IEEE
Advancing Technology for Humanity

IEEE Leads in Patent Citations

Top 20 Publishers Referenced Most Frequently by Top 40 Patenting Organizations



IEEE is cited over 3x more often than any other publisher

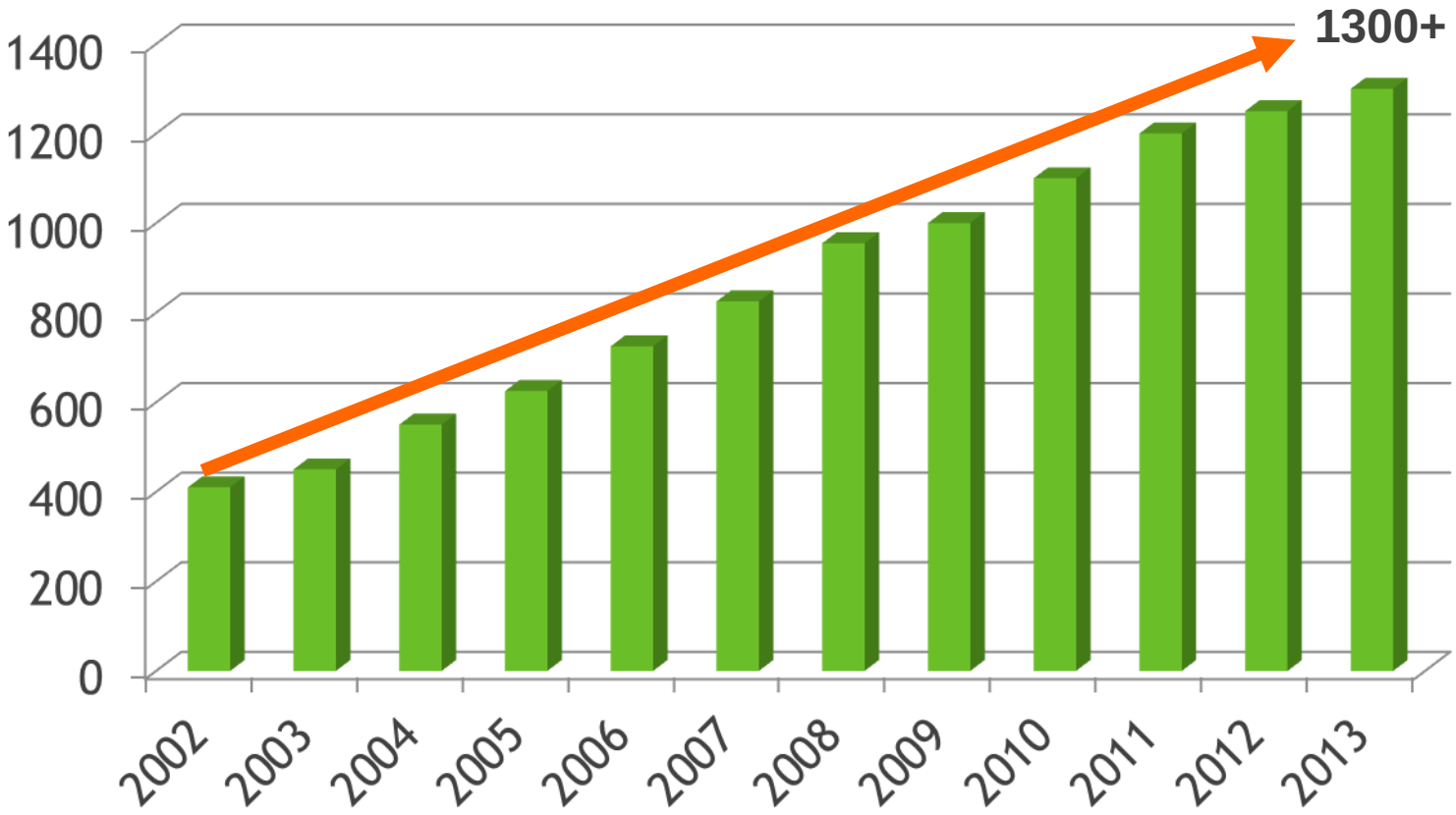
Source: 1790 Analytics LLC 2014. Based on number of references to papers/standards/conferences from 1997–2013.

More info: www.ieee.org/patentcitations

IEEE
Advancing Technology for Humanity

The IEEE conference collection continues to grow

Now over 1,300 annual conferences. Over 2.3 million total papers.



IEEE
Advancing Technology for Humanity

The world benefits from IEEE's impact

Maximize discoverability by publishing with IEEE

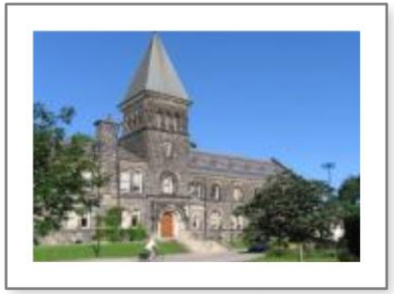
IEEE
Advancing Technology for Humanity

The world's most successful technology organizations rely on IEEE information

Technology Companies

- 7 out of top 10 Telecommunications companies
- 24 out of top 25 Semiconductor companies
- Top 10 Aerospace companies
- 9 of top 10 Auto & Truck Manufacturers
- 9 of top 10 Communications Equipment companies
- 4 of top 5 Electronics companies
- 4 of top 5 Computer Hardware

(Forbes Global 2000 Rankings, June 2014)



Universities

- All of the top 100 engineering schools in US
- 49 of the Top 50 Technical Universities Worldwide

(US News and World Report 2013, (Study based on 2012) Times Higher Education Top Technology Universities)

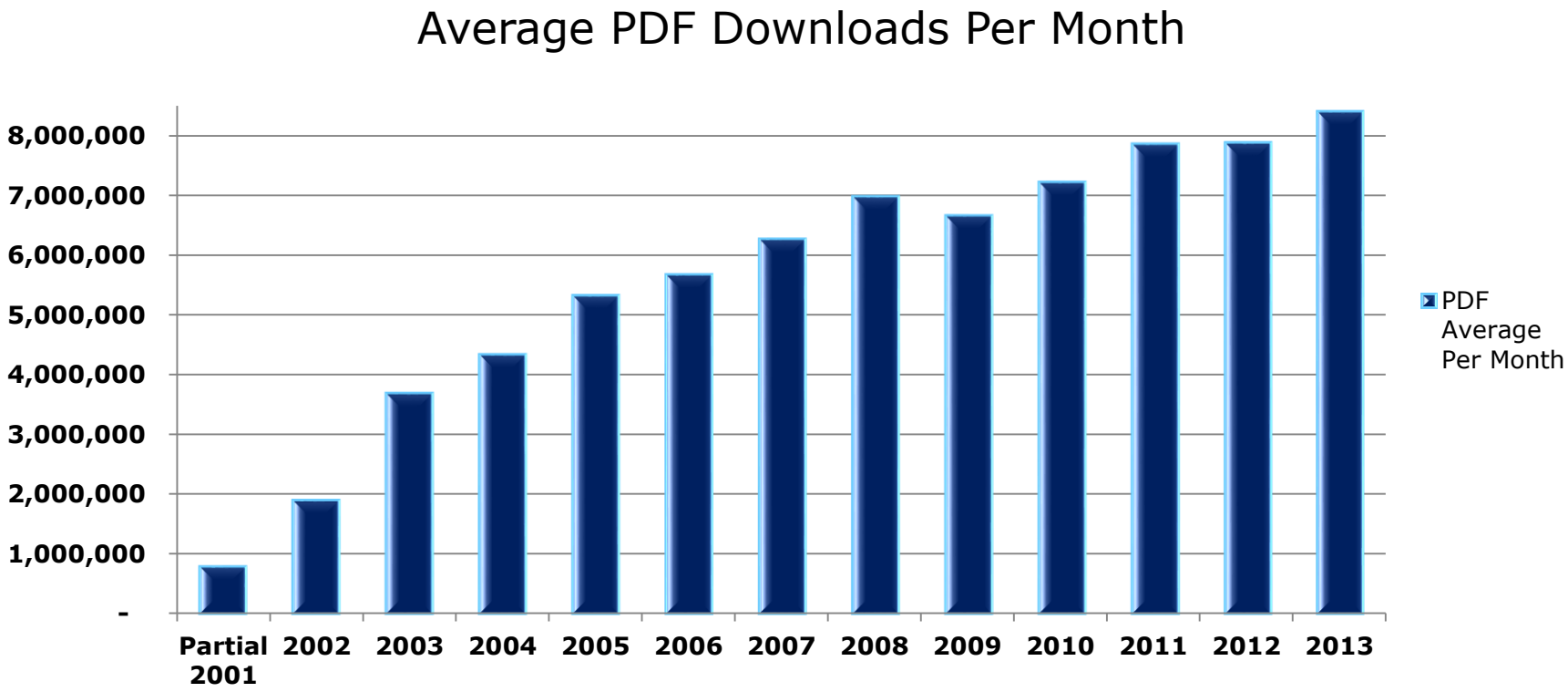
Government

- Defense research and aerospace agencies
- Communications and energy labs
- Patent offices and scientific councils
- Government R&D centers in North America, Europe, Asia and the Middle East

IEEE
Advancing Technology for Humanity

Maximize Discoverability with IEEE

Now, over 8 million downloads per month from IEEE *Xplore* from over 3 million unique users



Source: IEEE *Xplore* Internal Usage Stats

IEEE
Advancing Technology for Humanity

Today's Author Workshop

Topics Covered

1. Publishing choices
2. Choose an Audience
3. Paper Structure
4. Ethics
5. Where to Publish
6. Open Access
7. Impact Factor
8. Next Steps

Choices

Publish

IEEE journal or IEEE conference?

- A **journal article** is a fully developed presentation of your work and its final findings
  - Original research results presented
  - Clear conclusions are made and supported by the data
- A **conference article** can be written while research is ongoing
  - Can present preliminary results or highlight recent work
  - Gain informal feedback to use in your research
- Conference articles are typically shorter than journal articles, with less detail and fewer references.
- SNI requires papers in journals that are included in the *Journal Citations Reports* (JCR). Most IEEE journals are included in the JCR.

Publish

IEEE journal or IEEE conference?

	IEEE Journals	IEEE Conferences
PRO	• IEEE journals are cited 3 times more often in patent applications than other leading publisher's journals	• IEEE Conference proceedings are recognized worldwide as the most vital collection of consolidated published articles in EE, computer science, related fields
CON	• A high percentage of articles submitted to any professional publication are rejected	• Per IEEE Policy, if you do not present your article at a conference, it may be suppressed in IEEE *Xplore* and not indexed in other databases

Publish

Finding the right IEEE publication or IEEE conference

IEEE has **170 unique publications** covering a wide range of technical areas

- Review the journal listings
  - Who reads it
  - What they publish
  - What kinds of articles they want

IEEE publishes **1,200+** leading-edge **conference proceedings** every year

- Review the conference calendar
  - Find a good match for your research subject matter
  - Ensure you are available to present

IEEE Advancing Technology for Humanity

Audience

Audience

Basic Questions

1. Are you writing this paper for the sake of writing a paper?

2. Or do you want to make a difference in your technical community?

Audience

Scientific research publishing

- Who writes scientific papers?
  - Whoever solves a new and important problem in their field
  - Engineers, scientists, educators and researchers from:
    - Corporations
    - Academia
    - Government
  - Students typically write and present conference papers before submitting journal articles

Audience

What IEEE editors and reviewers are looking for

- Content that is appropriate, in scope and level, for the journal
- Clearly written original material that addresses a new and important problem
- Valid methods and rationale
- Conclusions that make sense
- Illustrations, tables and graphs that support the text
- References that are current and relevant to the subject

Audience

Why IEEE editors and reviewers reject papers

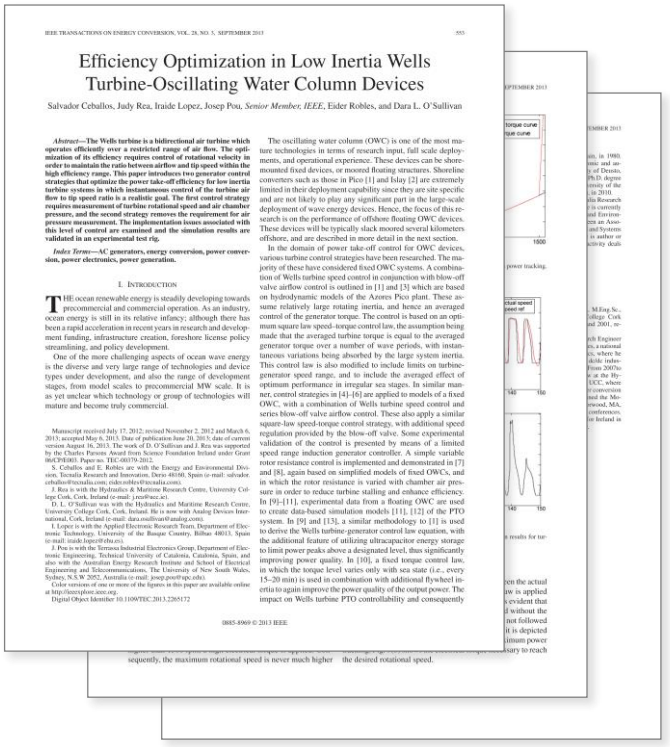
- The content is not a good fit for the publication
- There are serious scientific flaws:
  - Inconclusive results or incorrect interpretation
  - Fraudulent research
- It is poorly written
- It does not address a big enough problem or advance the scientific field
- The work was previously published
- The quality is not good enough for the journal
- Reviewers have misunderstood the article

Structure

Paper Structure

Elements of a manuscript

- Title
- Abstract
- Keywords
- Introduction
- Methodology
- Results/Discussions/Findings
- Conclusion
- References



IEEE TRANSACTIONS ON ENERGY CONVERSION, VOL. 28, NO. 3, SEPTEMBER 2013

Efficiency Optimization in Low Inertia Wells Turbine-Oscillating Water Column Devices

Salvador Ceballos, Judy Rea, Iraide Lopez, Josep Pou, *Senior Member, IEEE*, Eider Robles, and Dara L. O'Sullivan

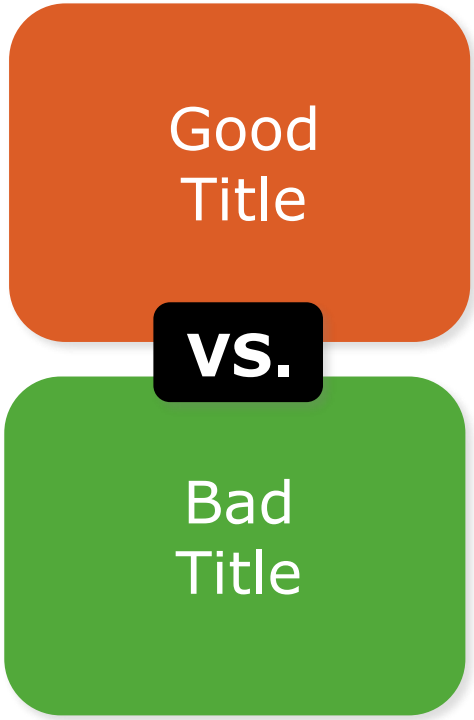
IEEE Advancing Technology for Humanity

Paper Structure

Title

An effective title should…

- Answer the reader's question: *"Is this article relevant to me?"*
- Grab the reader's attention
- Describe the content of a paper using the fewest possible words
  - Is crisp, concise
  - Uses keywords
  - Avoids jargon



Paper Structure

Good vs. Bad Title

A Human Expert-based Approach to Electrical Peak Demand Management

vs

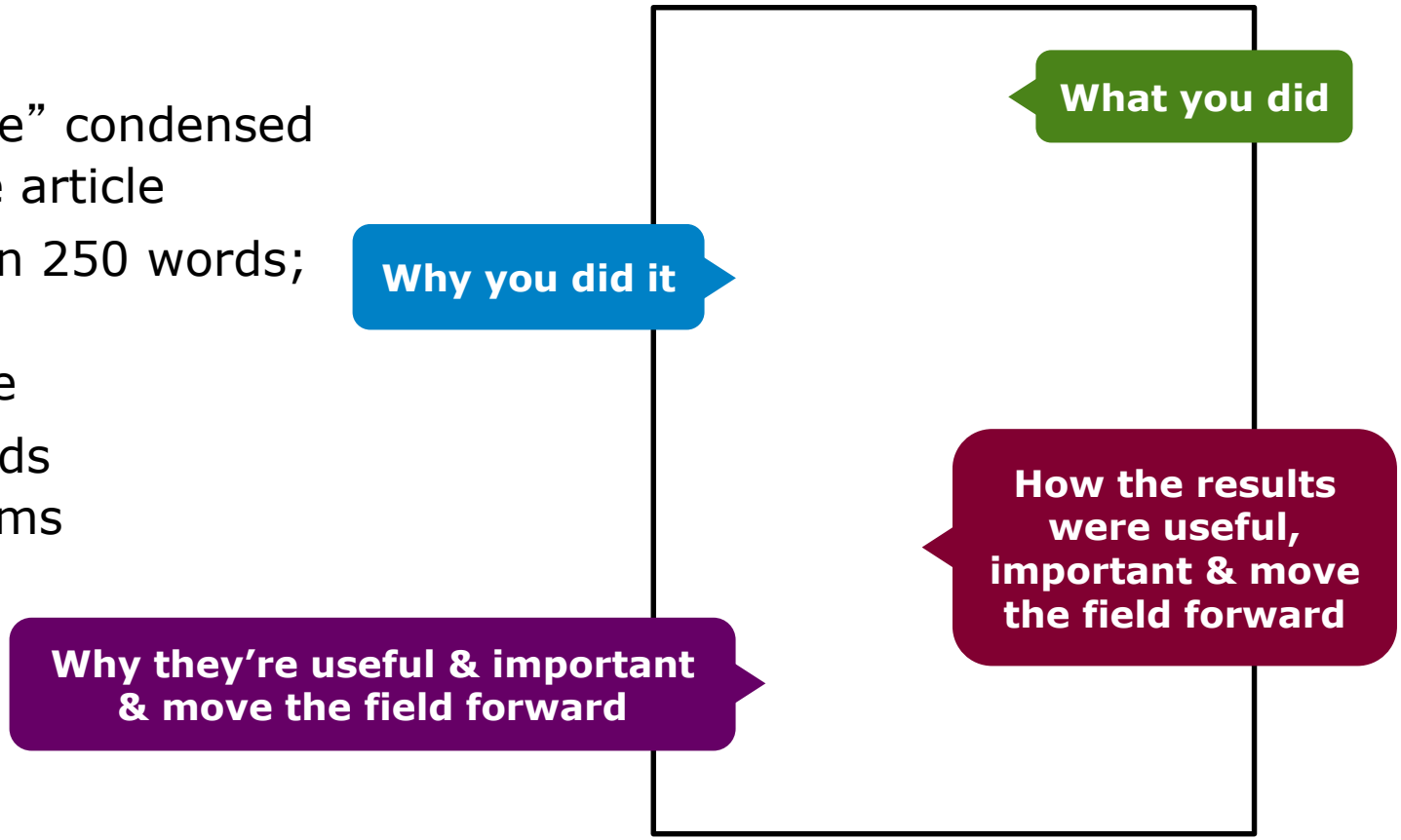
A better approach of managing environmental and energy sustainability via a study of different methods of electric load forecasting

Paper Structure

Abstract

A “stand alone” condensed version of the article

- No more than 250 words; written in the past tense
- Uses keywords and index terms



IEEE Advancing Technology for Humanity

Paper Structure

Good vs. Bad Abstract

The objective of this paper was to propose a human expert-based approach to electrical peak demand management. The proposed approach helped to allocate demand curtailments (MW) among distribution substations (DS) or feeders in an electric utility service area based on requirements of the central load dispatch center. Demand curtailment allocation was quantified taking into account demand response (DR) potential and load curtailment priority of each DS, which can be determined using DS loading level, capacity of each DS, customer types (residential/commercial) and load categories (deployable, interruptible or critical). Analytic Hierarchy Process (AHP) was used to model a complex decision-making process according to both expert inputs and objective parameters. Simulation case studies were conducted to demonstrate how the proposed approach can be implemented to perform DR using real-world data from an electric utility. Simulation results demonstrated that the proposed approach is capable of achieving realistic demand curtailment allocations among different DSs to meet the peak load reduction requirements at the utility level.

Vs

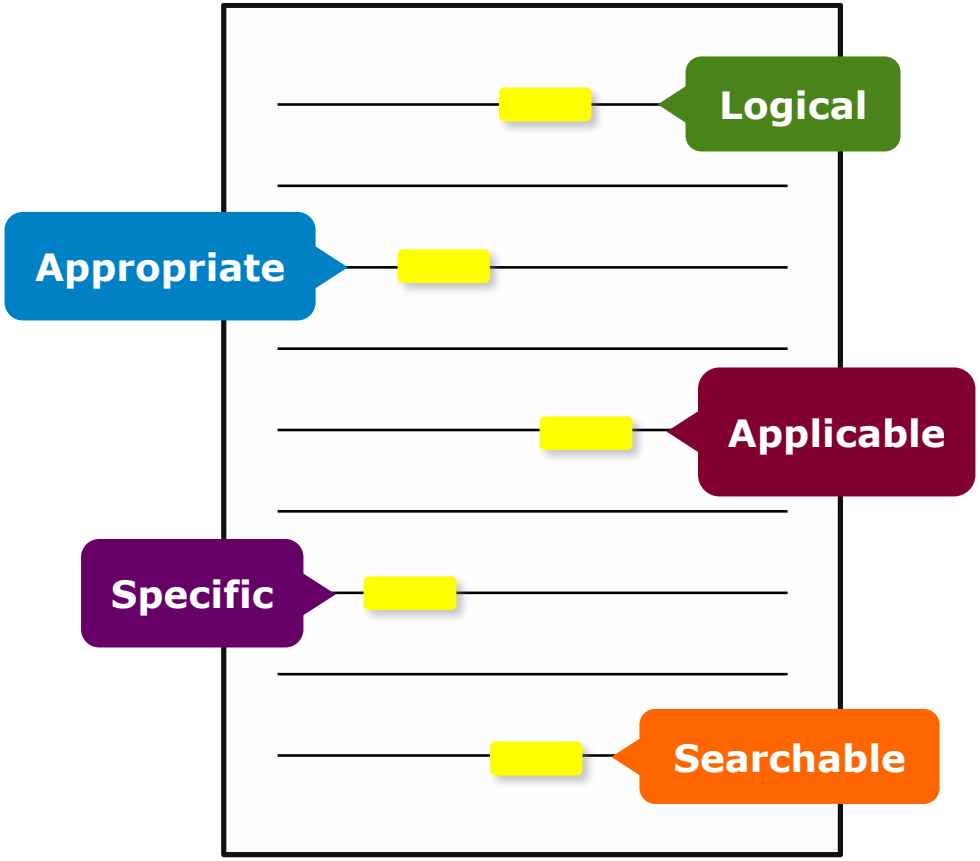
This paper presents and assesses a framework for an engineering capstone design program. **We explain** how student preparation, project selection, and instructor mentorship are the three key elements that must be addressed before the capstone experience is ready for the students. **Next, we describe** a way to administer and execute the capstone design experience including design workshops and lead engineers. **We describe the importance** in assessing the capstone design experience and report recent assessment results of our framework. **We comment** specifically on what students thought were the most important aspects of their experience in engineering capstone design and provide quantitative insight into what parts of the framework are most important.

First person, present tense
No actual results, only describes the organization of the paper

Paper Structure

Keywords

Use in the Title and Abstract for enhanced Search Engine Optimization

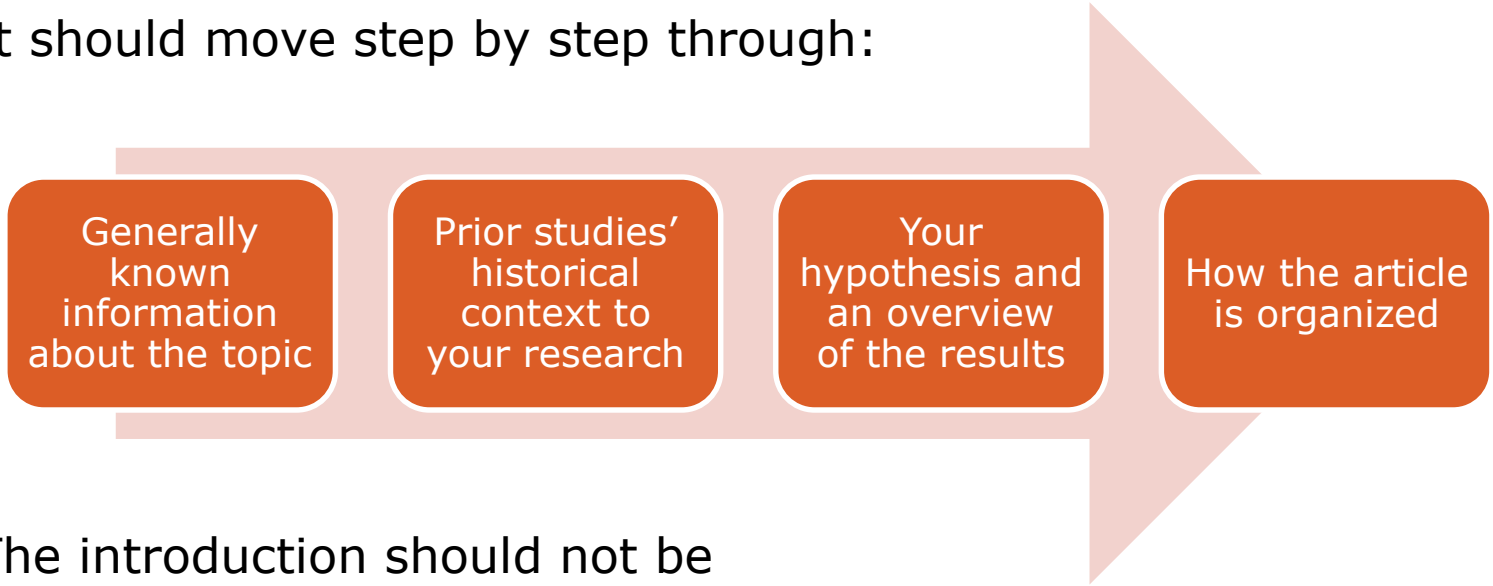


IEEE Advancing Technology for Humanity

Paper Structure

Introduction

- A description of the problem you researched
- It should move step by step through:



- The introduction should not be
  - Too broad or vague
  - More then 2 pages
  - Written in the present tense

Paper Structure

Methodology

- Problem formulation and the processes used to solve the problem, prove or disprove the hypothesis
- Use illustrations to clarify ideas, support conclusions:

Tables
Present representative data or when exact values are important to show

Figures
Quickly show ideas/conclusions that would require detailed explanations

Fig. A

Graphs
Show relationships between data points or trends in data

Paper Structure

Results/discussion

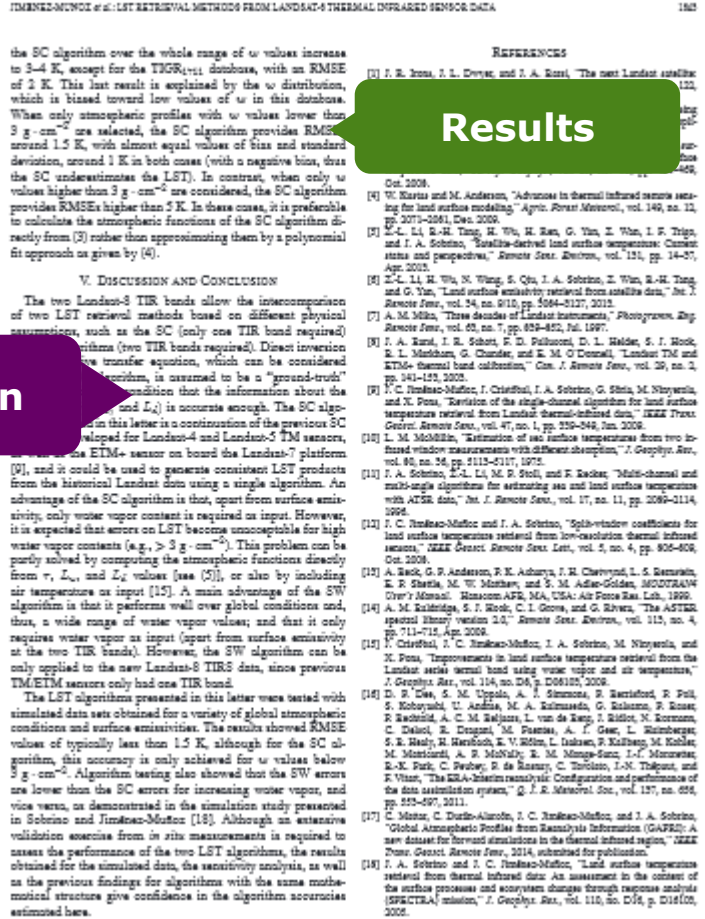
Demonstrate that you solved the problem or made significant advances

Results: Summarized Data

- Should be clear and concise
- Use figures or tables with narrative to illustrate findings

Discussion: Interprets the Results

- Why your research offers a new solution
- Acknowledge any limitations



Paper Structure

Conclusion

- Explain what the research has achieved
  - As it relates to the problem stated in the Introduction
  - Revisit the key points in each section
  - Include a summary of the main findings, important conclusions and implications for the field
- Provide benefits and shortcomings of:
  - The solution presented
  - Your research and methodology
- Suggest future areas for research

Paper Structure
References

- Support and validate the hypothesis your research proves, disproves or resolves
- There is no limit to the number of references
  - But use only those that directly support our work
- Ensure proper author attribution
  - Author name, *article title*, publication name, publisher, year published, volume, chapter and page number
  - IEEE journals generally follow a citation numbering system

Properly cited material

1536 IEEE TRANSACTIONS ON SMART GRID, VOL. 5, NO. 4, JULY 2014

We then have

$$(P_t^{b+}+P_t^{s-})^2-(P_t^{s+}-P_t^{b-})^2+4P_t^{s+}P_t^{s-} < (\hat{P}_t^{b+}-\hat{P}_t^{s-})^2+4\hat{P}_t^{s+}\hat{P}_t^{s-} -(\hat{P}_t^{s+}+\hat{P}_t^{b-})^2. \quad (32)$$

Since $P_t^{b+}-P_t^{b-}=\hat{P}_t^{s+}-\hat{P}_t^{s-}$, we then have $P_t^{s+}<P_t^{b+}$, and $P_t^{s-}<\hat{P}_t^{s-}$. Because the operational cost is an increasing function of $\{P_t^{s+},P_t^{b-}\}$, we obtain that

$$c_{op/st}(P_t^{s+},P_t^{s-})<c_{op/st}(\hat{P}_t^{s+},\hat{P}_t^{s-}). \quad (33)$$

Therefore the optimal pair $\{P_t^{s+},P_t^{s-}\}$ must satisfy that $P_t^{s+}P_t^{s-}=0$, i.e., only one of $P_t^{s+},\hat{P}_t^{s-}$ can be non-zero. ■

REFERENCES

[1] "Renewables: Energy You can Count on," Tech. Rep. Union of Concerned Scientists, 2013.
[2] S. Collier, "Ten steps to a smarter grid," *IEEE Ind. Appl. Mag.*, vol. 16, no. 2, pp. 62–68, 2010.
[3] J. A. Turner, "A realizable renewable energy future," *Sci.*, vol. 285, no. 5428, pp. 687–689, 1999.
[4] "Exploration of High-Penetration Renewable Electricity Futures," Tech. Rep. National Renewable Energy Lab., 2012.
[5] T. Wiedmann and J. Minx, *A Definition of 'Carbon Footprint'*. Hauppauge, NY, USA: Nova Science, 2008.
[6] J. Carrasco, L. Franquelo, J. Bialasiewicz, E. Galvan, R. Guisado, M. Prats, J. Leon, and N. Moreno-Alfonso, "Power-electronic systems for the grid integration of renewable energy sources: A survey," *IEEE Trans. Ind. Electron.*, vol. 53, no. 4, pp. 1002–1016, 2006.
[7] H. Ibrahim, A. Ilinca, and J. Perron, "Energy storage systems – characteristics and comparisons," *Renewable Sustainable Energy Rev.*, vol. 12, no. 5, pp. 1221–1250, 2008.
[8] J. Garcia-Gonzalez, R. de la Muela, L. Santos, and A. Gonzalez, "Stochastic joint optimization of wind generation and pumped-storage units in an electricity market," *IEEE Trans. Power Syst.*, vol. 23, no. 2, pp. 460–468, 2008.
[9] T. D. Nguyen, K.-J. Tseng, S. Zhang, and T. D. Nguyen, "On the modeling and control of a novel flywheel energy storage system," in *Proc. ... IEEE*, 2010, pp. 1395–1401.
[10] ... Zaza, T. Bhattacharya, D. Tran, T. Siew, and A. Khambadkone, "... posite energy storage system involving battery and ultracapacitor ... namic energy management in microgrid applications," *IEEE ... Electron.*, vol. 26, no. 3, pp. 923–930, 2011.
[11] ... and J. F. Miller, "Key challenges and recent progress in ... fuel cells, and hydrogen storage for clean energy systems," *... Power Sources*, vol. 159, no. 1, pp. 73–80, 2006.
[12] ... ston and D. Infield, "Energy storage and its use with intermittent ... newable energy," *IEEE Trans. Energy Conversion*, vol. 19, no. 2, pp. 441–448, 2004.
[13] K. G. Vosburgh, "Compressed air energy storage," *J. Energy*, vol. 2, no. 2, pp. 105–112, 1978.
[14] C. Abbey and G. Joos, "Supercapacitor energy storage for wind energy applications," *IEEE Trans. Ind. Appl.*, vol. 43, no. 3, pp. 769–776, 2007.
[15] P. Brown, J. P. Lopes, and M. Matos, "Optimization of pumped storage capacity in an isolated power system with large renewable penetration," *IEEE Trans. Power Syst.*, vol. 23, no. 2, pp. 523–531, 2008.
[16] C. Abbey and G. Joos, "A stochastic optimization approach to rating of energy storage systems in wind-diesel isolated grids," *IEEE Trans. Power Syst.*, vol. 24, no. 1, pp. 418–426, 2009.
[17] Y. Zhang, N. Gatsis, and G. Giannakis, "Robust energy management for microgrids with high-penetration renewables," *IEEE Trans. Sustainable Energy*, vol. PP, no. 99, pp. 1–10, 2013.
[18] S. Boyd, N. Parikh, E. Chu, B. Peleato, and J. Eckstein, "Distributed optimization and statistical learning via the alternating direction method of multipliers," *Foundations Trends Mach. Learning*, vol. 3, no. 1, pp. 1–122, 2010.
[19] G. Calafiore and M. Campi, "The scenario approach to robust control design," *IEEE Trans. Autom. Contr.*, vol. 51, no. 5, pp. 742–753, 2006.
[20] A. Shapiro, D. Dentcheva, and A. Ruszczyński, *Lectures on Stochastic Programming: Modeling and Theory*. Philadelphia, NJ, USA: SIAM, 2009.
[21] Y. Zhang, N. Gatsis, and G. Giannakis, "Risk-constrained energy management with multiple wind farms," in *Proc. IEEE PES ISGT*, Feb. 2013, pp. 1–6.
[22] Y. Zhang, N. Gatsis, V. Kekatos, and G. Giannakis, "Risk-aware management of distributed energy resources," in *Proc. Int. Conf. Digital Signal Process.*, Jul. 2013, pp. 1–5.
[23] P. Yang and A. Nehorai, "Hybrid energy storage and generation planning with large renewable penetration," in *IEEE Int. Workshop Comput. Adv. Multi-Sensor Adaptive Process.*, Dec. 2013, pp. 1–4.
[24] EPRI, "Electricity Energy Storage Technology Options: A White Paper Primer on Applications, Costs, and Benefits," Tech. Rep. EPRI, Palo Alto, CA, USA, 2010.
[25] *National Solar Radiation Data Base*, [Online]. Available: http://rredc.nrel.gov/solar/old_data/nsrdb/
[26] S. Wilcox, *National Solar Radiation Database 1991 – 2010 Update: User's Manual*, 2012.
[27] EPRI, "Renewable Energy Technical Assessment Guide – TAGRE:2006," Tech. Rep. EPRI, Palo Alto, CA, USA, 2007.
[28] *ERCOT Hourly Load Data Archive* [Online]. Available: http://www.ercot.com/gridinfo/load/load_hist/
[29] M. Grant and S. Boyd, *CVX: Matlab Software for Disciplined Convex Programming*, Version 2.0 Beta 2012 [Online]. Available: http://cvxr.com/cvx
[30] "MISO Daily Report," 2011, Electric Power Markets: Midwest (MISO), FERC [Online]. Available: http://www.ferc.gov/market-oversight/mkt-electric/midwest/miso-archives.asp
[31] "CAISO Daily Report," 2011, Electric Power Markets: California (CAISO), FERC [Online]. Available: http://www.ferc.gov/market-oversight/mkt-electric/california/caiso-archives.asp

Peng Yang (S'11) received the B.Sc. degree in electrical engineering from University of Science and Technology, Anhui, China in 2009, and the M.Sc. and Ph.D. degrees in electrical engineering from Washington University in St. Louis, St. Louis, MO, USA, in 2011 and 2014, respectively. His Ph.D. advisor is Dr. Arye Nehorai.

His research interests include statistical signal processing, optimization, machine learning, and compressive sensing, with applications in smart grids.

Arye Nehorai (S'80–M'83–SM'90–F'94) received the B.Sc. and M.Sc. degrees from the Technion, Haifa, Israel, and the Ph.D. degree from Stanford University, Stanford, CA, USA.

He is the Eugene and Martha Lohman Professor and Chair of the Preston M. Green Department of Electrical and Systems Engineering (ESE) at Washington University in St. Louis (WUSTL), St. Louis, MO, USA. Earlier, he was a faculty member at Yale University and the University of Illinois at Chicago.

Dr. Nehorai served as Editor-in-Chief of IEEE TRANSACTIONS ON SIGNAL PROCESSING from 2000 to 2002. From 2003 to 2005 he was the Vice President of the IEEE Signal Processing Society (SPS), the Chair of the Publications Board, and a member of the Executive Committee of this Society. He was the founding Editor of the special columns on Leadership Reflections in *IEEE Signal Processing Magazine* from 2003 to 2006. He has been a Fellow of the IEEE since 1994, the Royal Statistical Society since 1996, and the AAAS since 2012.

IEEE Advancing Technology for Humanity

Ethics

Ethics

Types of misconduct

Conflict of Interest

- A financial or other relationship with the publication at odds with the unbiased presentation of data or analysis

Plagiarism

- Copying another person's work word for word or paraphrasing without proper citation

Author Attribution

- Must be given if you use another author's ideas in your article, even if you do not directly quote a source

Author involvement/ contributions

- Include any and all who have made a substantial intellectual contribution to the work
- Do not include minor contributors

Ethics

Ethical publishing

Plagiarism

- Avoid plagiarism
  - Cite and separate any verbatim copied material
  - Paraphrase reused text properly, and include citation
  - Credit any reused ideas
  - Familiarize yourself with IEEE Policies

Refer to our Tips Sheet
http://www.ieee.org/publications_standards/publications/authors/plagiarism_and_multiple_submissions.pdf

Ethics

Ethical publishing

Duplication, Redundancies & Multiple Submissions

- Author must submit original work that:
  - Has not appeared elsewhere for publication
  - Is not under review for another refereed publication
  - Cites previous work
  - Indicates how it differs from the previously published work
  - Authors MUST also **inform the editor** when submitting any previously published work

Refer to our Tips Sheet
http://www.ieee.org/publications_standards/publications/authors/plagiarism_and_multiple_submissions.pdf

Where to Publish?

Types

Traditional Journals –

Users/Libraries pay for access

Open Access Journals –

Author pays, free download

Hybrid Journals –

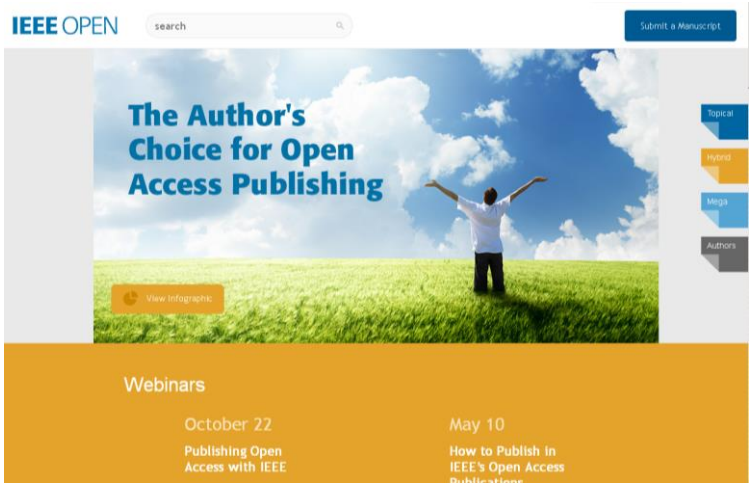
Most articles are traditional, some are open access (author preference)

Open Access Publications

Next Steps

Open Access Opportunity for IEEE Authors (Author pay model)

- IEEE provides 3 open access publishing options to meet the varying needs of authors throughout their careers:
  - New multidisciplinary mega journal
  - Over 100+ Hybrid journals
  - Fully open access topical journals



http://open.ieee.org/

IEEE Advancing Technology for Humanity

How IEEE Access can work for you

IEEE Access makes it easy for practitioners, researchers, institutions, funding agencies, and others to make published information available to everyone.

› View a video about IEEE Access

IEEE
Advancing Technology for Humanity

IEEE
Advancing Technology for Humanity

Topical Journal

Memberships and Subscriptions Catalog

Browse

Power and Energy Technology Systems Journal, IEEE

IEEE Power and Energy Systems Technologies Journal is intended to be a technical journal containing practice-oriented articles focusing on the development, planning, design, construction, maintenance, installation and operation of equipment, structures, materials and power systems for the safe, sustainable, economic and reliable conversion, generation, transmission, distribution, storage and usage of electric energy, including its measurement and control.

NEW FOR 2014

› View list of sponsoring societies

IEEE open access publications are available electronically at no cost.

Product No: ONL289

Impact Factor

Are we depending too heavily on Impact Factors?

There is more than one type of Impact Factor

Impact Factor from Journal Citation Reports

THOMSON REUTERS | Products & Services | About Us | Support & Training | Contact Us | Search

Home / Products & Services / Scholarly & Scientific Research / Research Management and Evaluation / Journal Citation Reports®

Journal Citation Reports®

The recognized authority for evaluating journals

Systematic and objective

HIGHLIGHTS

- Objective view of impact
- Quantifiable, statistical data
- Analysis tools
- Journal Impact Factor

INTENDED FOR

Academic Researcher

Librarian

EMAIL | PRINT

FACT SHEET

CONTACT SALES

ISI Web of Knowledge℠

Journal Citation Reports®

WELCOME HELP

2013 JCR Science Edition

Journal Summary List

Journal Title Changes

Journals from: subject categories ENGINEERING, ELECTRICAL & ELECTRONIC VIEW CATEGORY SUMMARY LIST

Sorted by: Impact Factor SORT AGAIN

Journals 1 - 20 (of 247) [1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10] Page 1 of 13

MARK ALL UPDATE MARKED LIST

Ranking is based on your journal and sort selections.

Mark	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data						*Eigenfactor*® Metrics	
				Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	*Eigenfactor*® Score	*Article Influence*® Score
☐	1	IEEE WIREL COMMUN	1536-1284	2910	6.524	5.123	0.589	95	4.9	0.01190	2.294
☐	2	IEEE T IND ELECTRON	0278-0046	24432	6.500	6.515	1.441	553	4.5	0.06120	1.528
☐	3	IEEE T FUZZY SYST	1063-6706	7208	6.306	5.797	0.902	92	6.9	0.01207	1.382
☐	4	IEEE T POWER ELECTR	0885-8993	17852	5.726	5.558	1.059	540	5.2	0.03903	1.332
☐	5	IEEE T PATTERN ANAL	0162-8828	27275	5.694	7.015	0.659	223	>10.0	0.04888	3.155
☐	6	P IEEE	0018-9219	20916	5.466	7.617	0.558	154	>10.0	0.04117	3.501
☐	7	IEEE IND ELECTRON M	1932-4529	505	5.061	5.422	0.941	17	3.6	0.00267	1.926
☐	8	PROG QUANT ELECTRON	0079-6727	803	4.688	7.027	0.571	7	>10.0	0.00151	2.447
☐	9	IEEE SIGNAL PROC MAG	1053-5888	5580	4.481	7.379	1.574	68	6.5	0.02023	3.852
☐	10	IEEE COMMUN MAG	0163-6804	8466	4.460	4.755	0.514	212	5.3	0.03153	1.929
☐	11	IEEE T NEUR NET LEAR	2162-237X	10778	4.370	4.308	0.691	181	8.4	0.01775	1.184
☐	12	IEEE T THZ SCI TECHN	2156-342X	548	4.342	4.586	0.333	96	2.3	0.00365	1.967
☐	13	IEEE T SMART GRID	1949-3053	2130	4.334	5.776	0.294	245	2.4	0.00944	1.598
☐	14	IEEE J SEL AREA COMM	0733-8716	11449	4.138	4.932	0.497	294	7.6	0.03185	2.395
☐	15	IEEE T SUSTAIN ENERG	1949-3029	791	3.842	4.052	0.724	116	2.2	0.00371	1.275
☐	16	IEEE T MED IMAGING	0278-0062	12890	3.799	4.575	0.544	193	9.5	0.02327	1.595
☐	17	IEEE NETWORK	0890-8044	1500	3.720	3.349	0.071	56	7.0	0.00464	1.423

IEEE Advancing Technology for Humanity

An Alternative Impact Factor

SJIF Impact Factor

Scientific Journal Impact Factor (SJIF)

Value for 2013 is **5.098**

International Journal on Recent and Innovation Trends in Computing and Communication (IJRITCC)

Calling papers for Volume 2 | Issue 7 | July 2014

ISSN: 2321-8169

www.ijritcc.org

Published by: Auricle Technologies Pvt. Ltd.

Scientific Journal Impact Factor (SJIF) Value for 2013 is 5.098

Impact Factor (5.098)

http://www.sjifactor.inno-space.org/passport.php?id=1244

Index in Google Scholar

http://scholar.google.co.in/scholar?q=ijritcc&btnG=&hl=en&as_sdt=0%2C5

Index in Academia.edu

https://ijritcc.academia.edu/ijritcc/

IJRITCC is indexed in Google Scholar, Slideshare, Scribd, Academia, Research Gate and many more.

Kindly send your paper / manuscript to us by mailing to editor@ijritcc.org

Kindly include research area (Ex: Civil Engineering, Electrical Engineering, Marine Engineering) along with your paper

Important Dates

Manuscript Submission : 31 July 2014
Acceptance Notification : Within 7 days
Manuscript Registration : Within 7 days after Review Feedback
Manuscript Publication : Within 5 days after Registration

Publication Charges

Indian Authors : INR 2000
Foreign Authors : 100 USD

Impact Factor is not enough of a metric

- Journal's reputation in the community is important
- For new and lesser known journals – look at the editorial board, their reputation

Other ways of judging a journal's value to the engineering community

1. **Number of Downloads** (IEEE uses this information for revenue distribution)

2. **Patent Citations** (Available from IEEE)

Next Steps

Next Steps: IEEE *Xplore*® and other author tools

IEEE Xplore®
DIGITAL LIBRARY

Prepare

First Steps

Your research problem must contribute new and important knowledge to your field

- **Conduct a Literature Review**
- Take Notes & Keep Track
- Gather References & Citations
- Draft an Outline

Tools to start your literature review

- Full-text databases
  - IEEE *Xplore*®
  - Other relevant scientific publishers
- Abstracting and Indexing databases
- For more resources, contact your institution's library

IEEE
Advancing Technology for Humanity

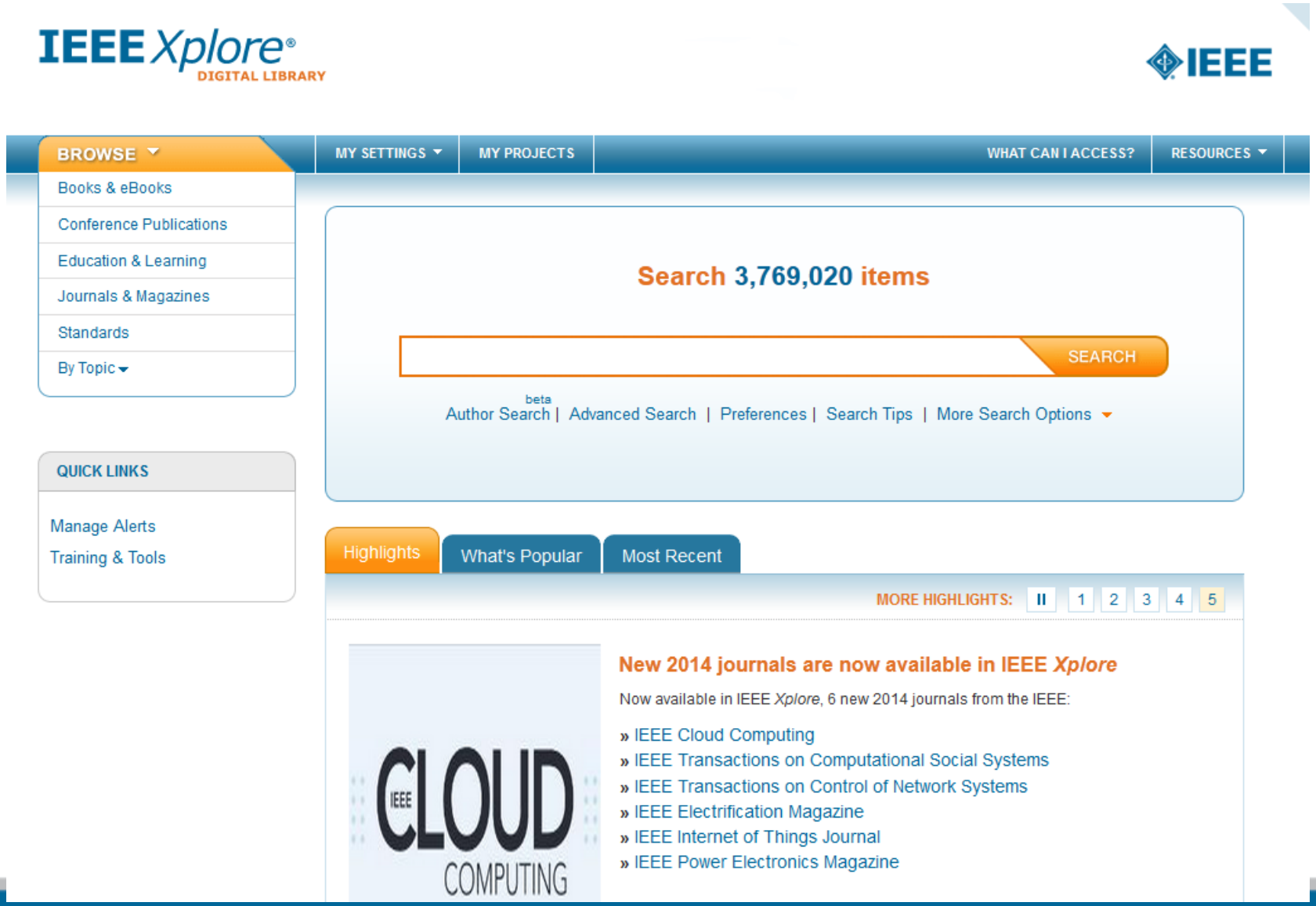
Current IEEE content on *IEEE Xplore®*

- 3.7 full-text documents and growing
  - About 25k new documents added monthly
  - Xplore updated daily
- 160+ IEEE journals & magazines
- 1,200+ annual IEEE conferences
- 2,500+ active and archived IEEE standards
- Backfile to 1988 with select legacy content back to 1872
- Access to search, abstracts and personal accounts are free to guests. Full-text requires a subscription

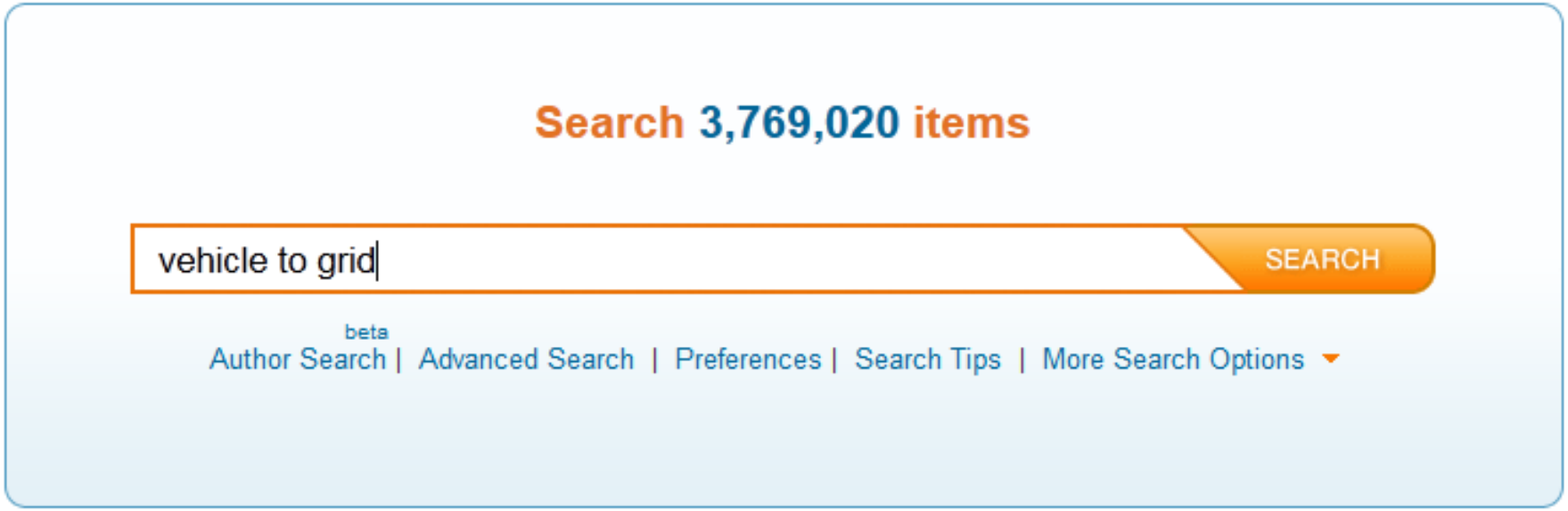
http://ieeexplore.ieee.org

IEEE
Advancing Technology for Humanity

Getting started

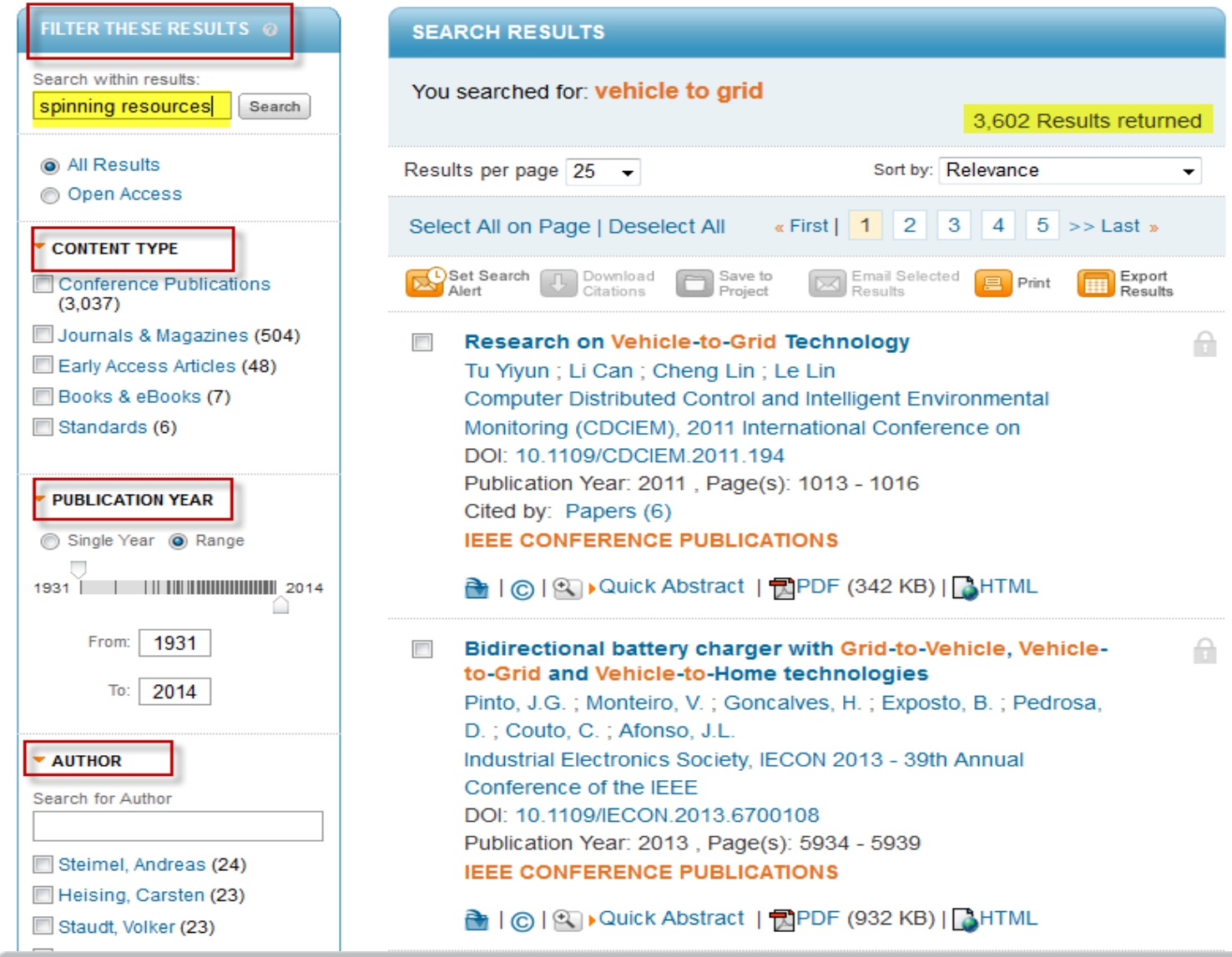


Start simply



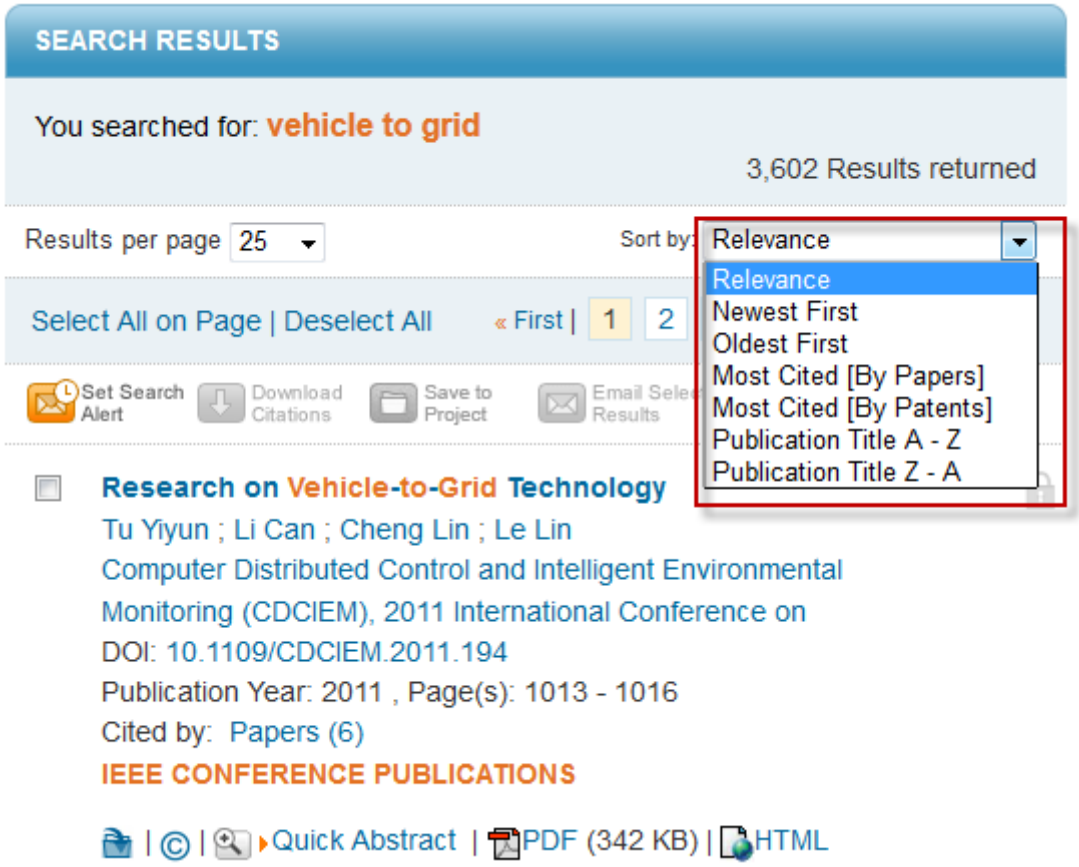
IEEE
Advancing Technology for Humanity

Then narrow, or refine



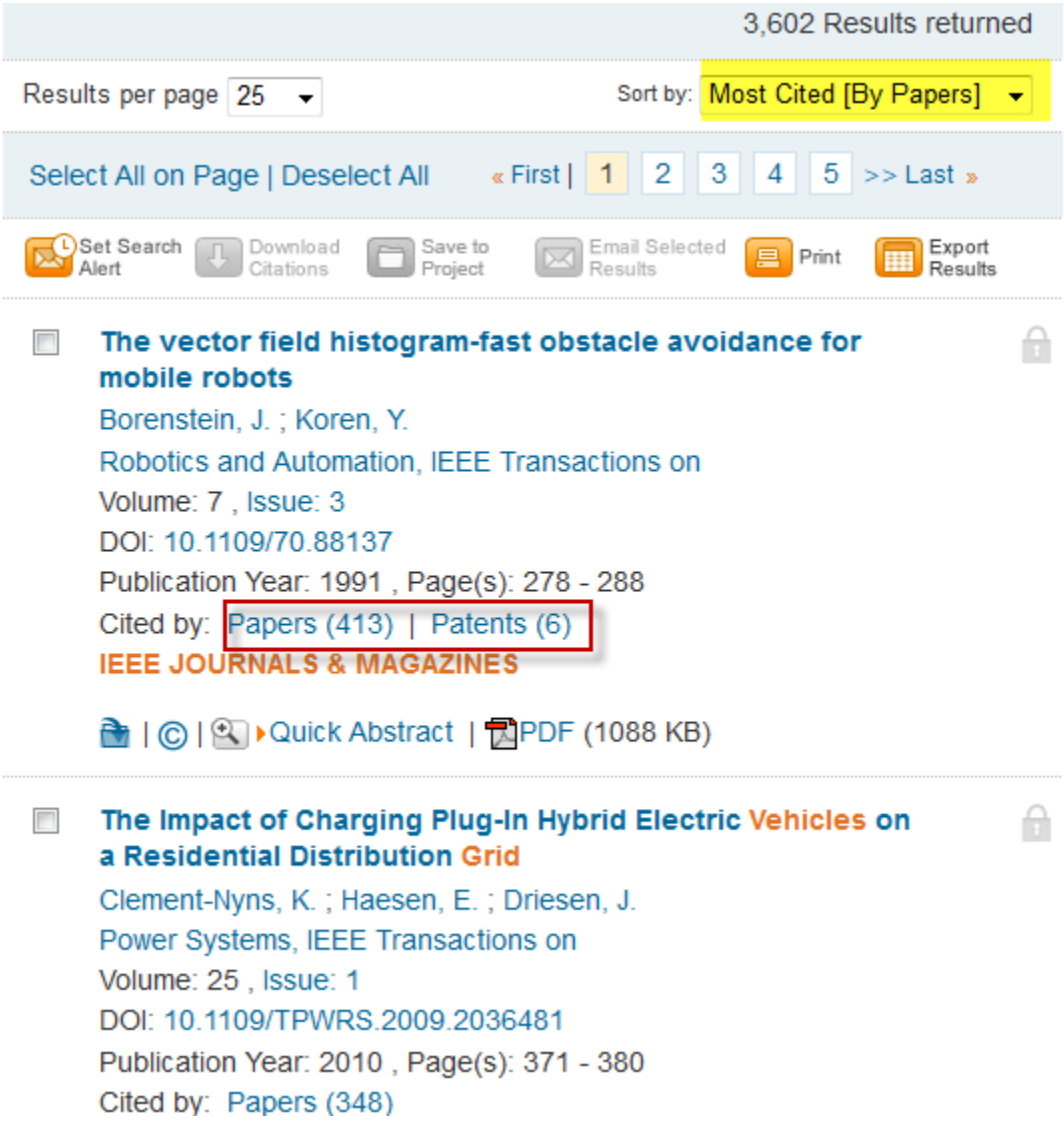
IEEE
Advancing Technology for Humanity

Re-sort your results to find new or highly-cited papers



IEEE
Advancing Technology for Humanity

Most cited – by papers or patents



IEEE
Advancing Technology for Humanity

Helpful Tips on searching *IEEE Xplore®*

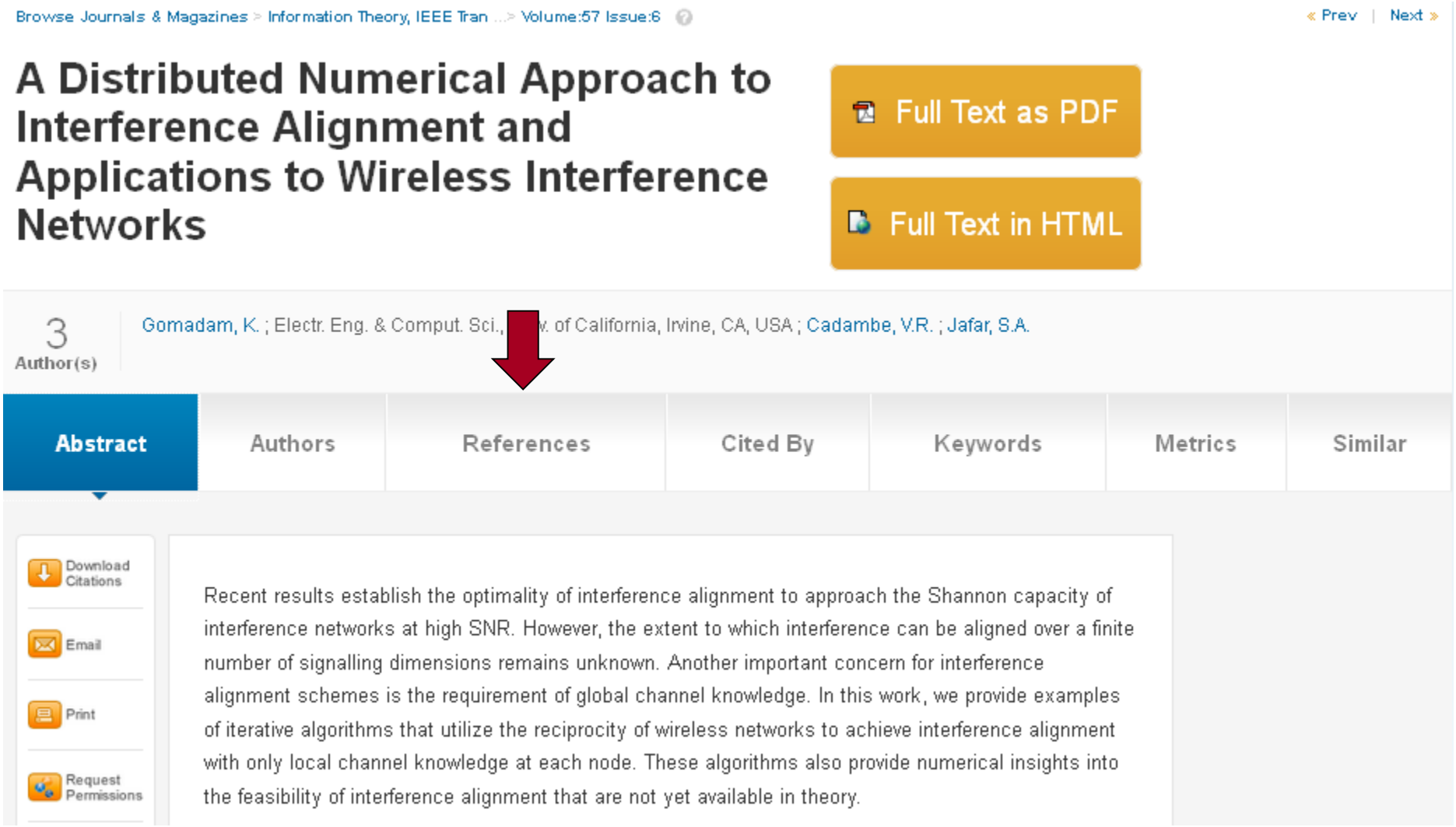
- Target specific publications once you've found the right focus
- Use "Advanced Search" or "Command Search" for multi-field or more complex searches
  - Full-text search
  - Boolean operators
  - Phrase nesting
- Use a personal account to stay organized while doing literature searches

IEEE
Advancing Technology for Humanity

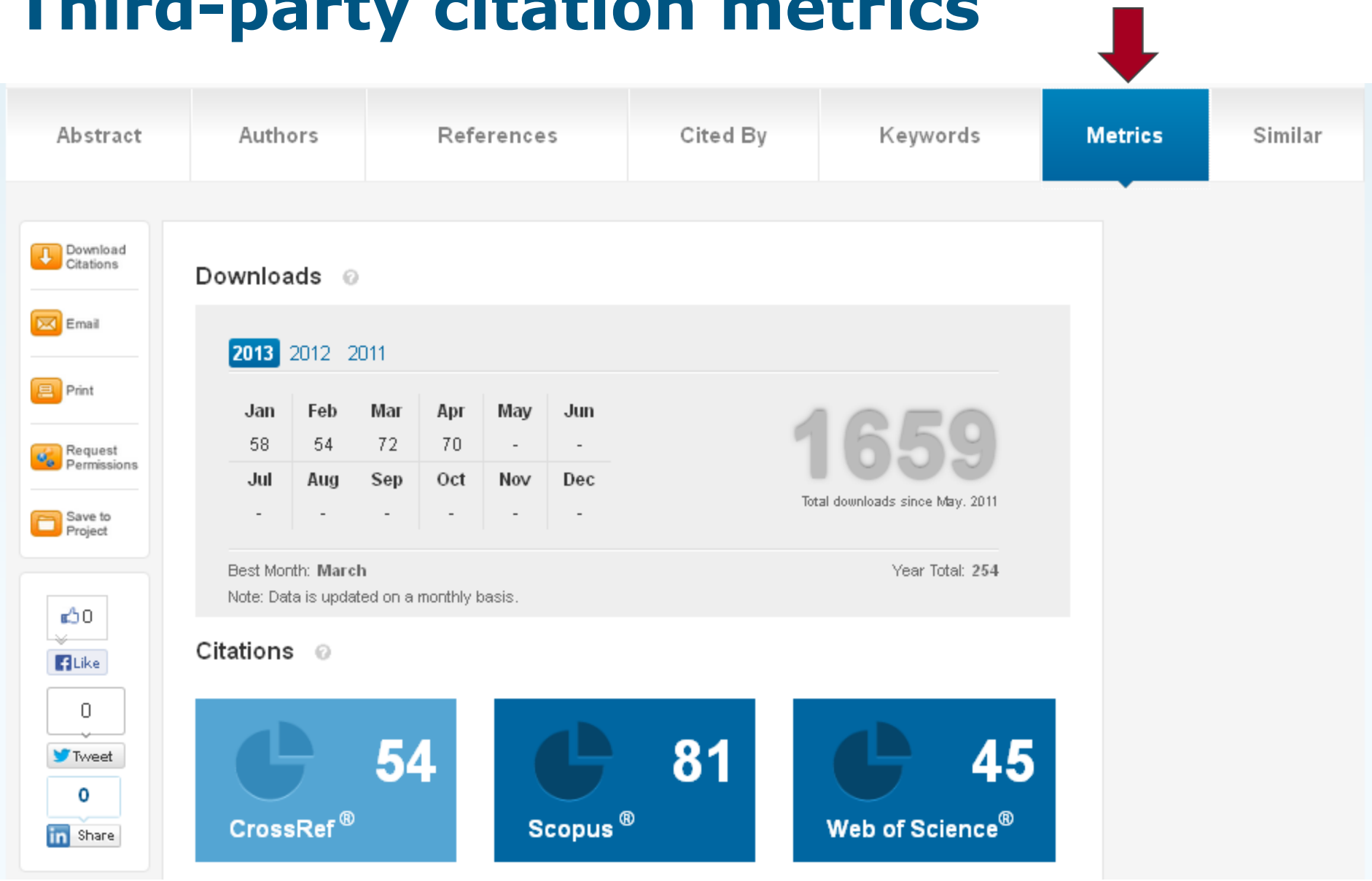
Two ways to use references and citations

- One paper's reference list can be a gateway to a second set of relevant articles during your literature search
- You will need to cite references in your paper to support your research

Find references on Abstract Pages

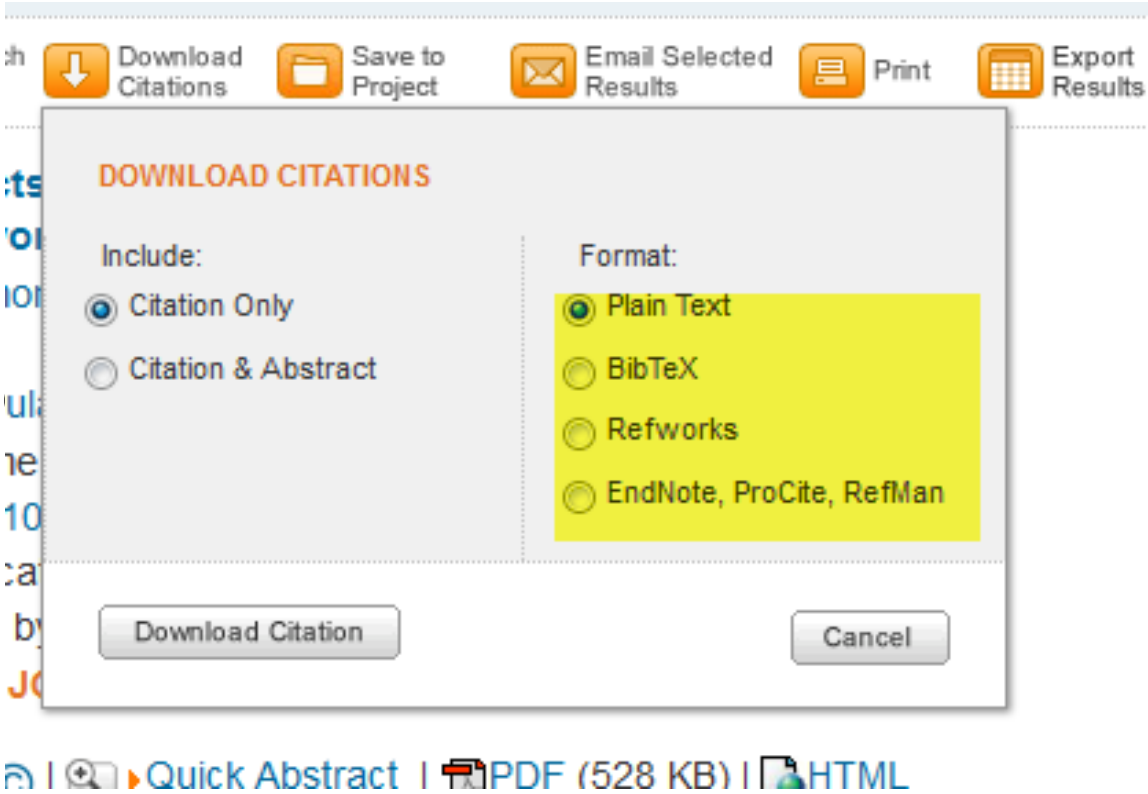


Third-party citation metrics



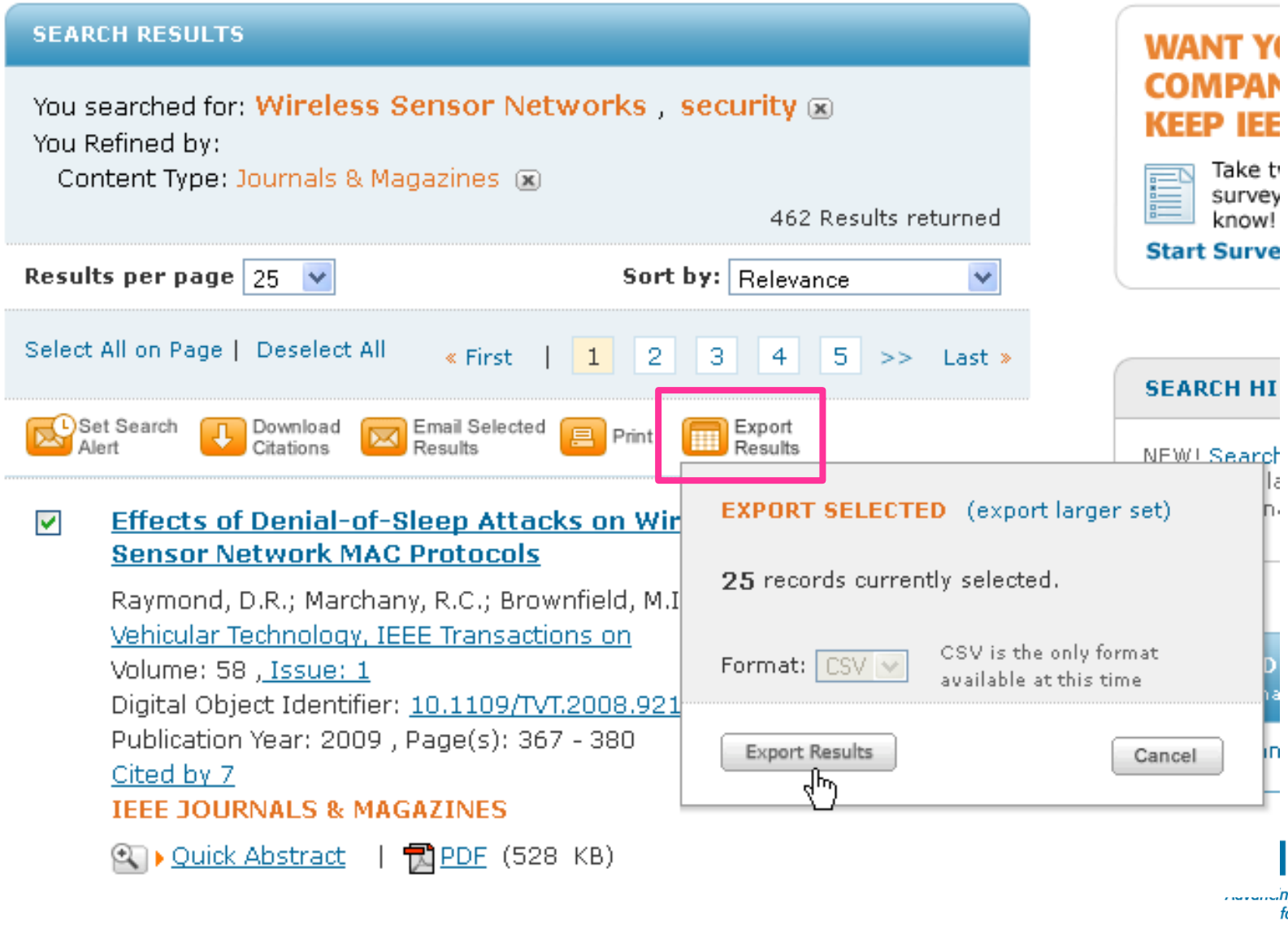
Choose your format

- Plain text
- BibTex
- Refworks
- Endnote, ProCite, RefMan



IEEE
Advancing Technology for Humanity

Or Download to CSV/Excel



IEEE
Advancing Technology for Humanity

Questions about searching IEEE *Xplore*® ?

Visit www.ieee.org/go/clientservices

IEEE Client Services

- IEEE Client Services Menu
- IEEE Client Services Home
- IEEE Xplore Digital Library Training
- Promote Your Subscription
- Customer Tools
- Getting Started Guide
- Exhibits and Events
- Useful Links
- IEEE Xplore Social Media Hub
- Frequently Asked Questions
- IEEE Client Services Team

Your portal to IEEE *Xplore*® digital library subscription training and tools

IEEE Client Services provides training and promotional materials to institutions and individuals who subscribe to IEEE *Xplore* digital library subscription products.

On this Page:

- IEEE Xplore training
- IEEE Xplore promotional tools

IEEE Xplore training

Search faster with better results by learning more about the powerful features of IEEE *Xplore*.

Training options

Sign up for a free webinar or view a self-paced tutorial.

- Sign up for live online training session
- View self-paced tutorials
- Download IEEE *Xplore* user guides

IEEE *Xplore* User Tips

Learn tips and techniques to help you improve your search results and get the most out of IEEE *Xplore*.

- Read IEEE *Xplore* user tips

Contact IEEE Client Services

Contact the IEEE Client Services team for information about IEEE *Xplore*.

- E-mail training@ieee.org
- Meet the Client Services team

Contact Information

IEEE Sales Representatives
IEEE Account Managers
IEEE International Dealers

Technical Support
Contact the technical support team for technical issues.
Worldwide +1 732 981 0060
US +1 800 701 IEEE (4333)

- E-mail onlinesupport@ieee.org

Join Our Community Pages

Follow IEEE *Xplore*

Like IEEE *Xplore*

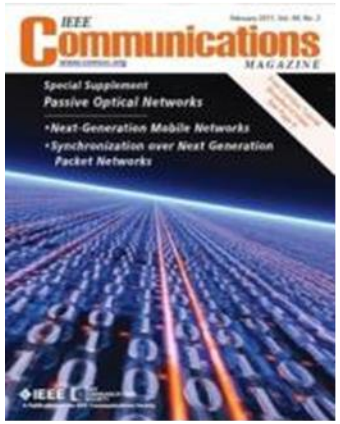
IEEE Advancing Technology for Humanity

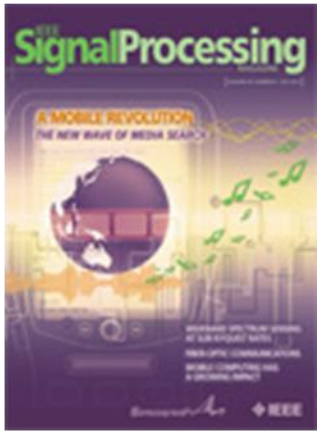
Prepare

Final Steps

Find the right publication and submit your paper

- **Identify relevant journals**
- Browse conference calls for papers
- Submit your paper





IEEE Advancing Technology for Humanity

Choose

Find periodicals in IEEE *Xplore*®

Search on your area of research to identify the top journals or conferences

IEEE
Advancing Technology for Humanity

Choose

Find periodicals in IEEE *Xplore*®

Browse by **Title** or **Topic** to find the periodical that's right for your research

IEEE
Advancing Technology for Humanity

Automatic Control, IEEE Transactions on

2.718	0.04492	1.538
Impact Factor	Eigenfactor	Article Influence Score

Aims & Scope

The theory, design and application of Control Systems. It shall encompass components, and the integration of these components, as are necessary for the construction of such systems. The word `systems' as used herein shall be interpreted to include physical, biological, organizational and other entities and combinations thereof, which can be represented through a mathematical symbolism. The Field of Interest: shall include scientific, technical, industrial or other activities that contribute to this field,or utilize the techniques or products of this field, subject, as the art develops, to additions, subtractions, or other modifications directed or approved by the IEEE Technical Activities Board.

Persistent Link: http://ieeexplore.ieee.org/servlet/opac?punumber=9 More »

Average Dwell Time”

Author Resources

- IEEE Author Digital Toolbox
- Additional Information
- IEEE Open Access Publishing Options

Society Sponsor

Title History

- (1956 - 1962) Automatic Control, IRE Transactions on

Contacts

Editor-in-Chief
P. J. Antsaklis
Dept. Electrical Engineering
University of Notre Dame

Persistent Link: http://ieeexplore.ieee.org/servlet/opac?punumber=9 More »

Frequency: 12

ISSN: 0018-9286

Publication Details: IEEE Transactions on Automatic Control

Published by:

- IEEE Control Systems Society

Subjects

Signal Processing & Analysis

Contacts

Editor-in-Chief
P. J. Antsaklis
Dept. Electrical Engineering
University of Notre Dame
Notre Dame, IN 46556 46556 USA
antsaklis.1@nd.edu
Phone:+1 574-631-5792
Fax:+1 574-631-4393

Prepare

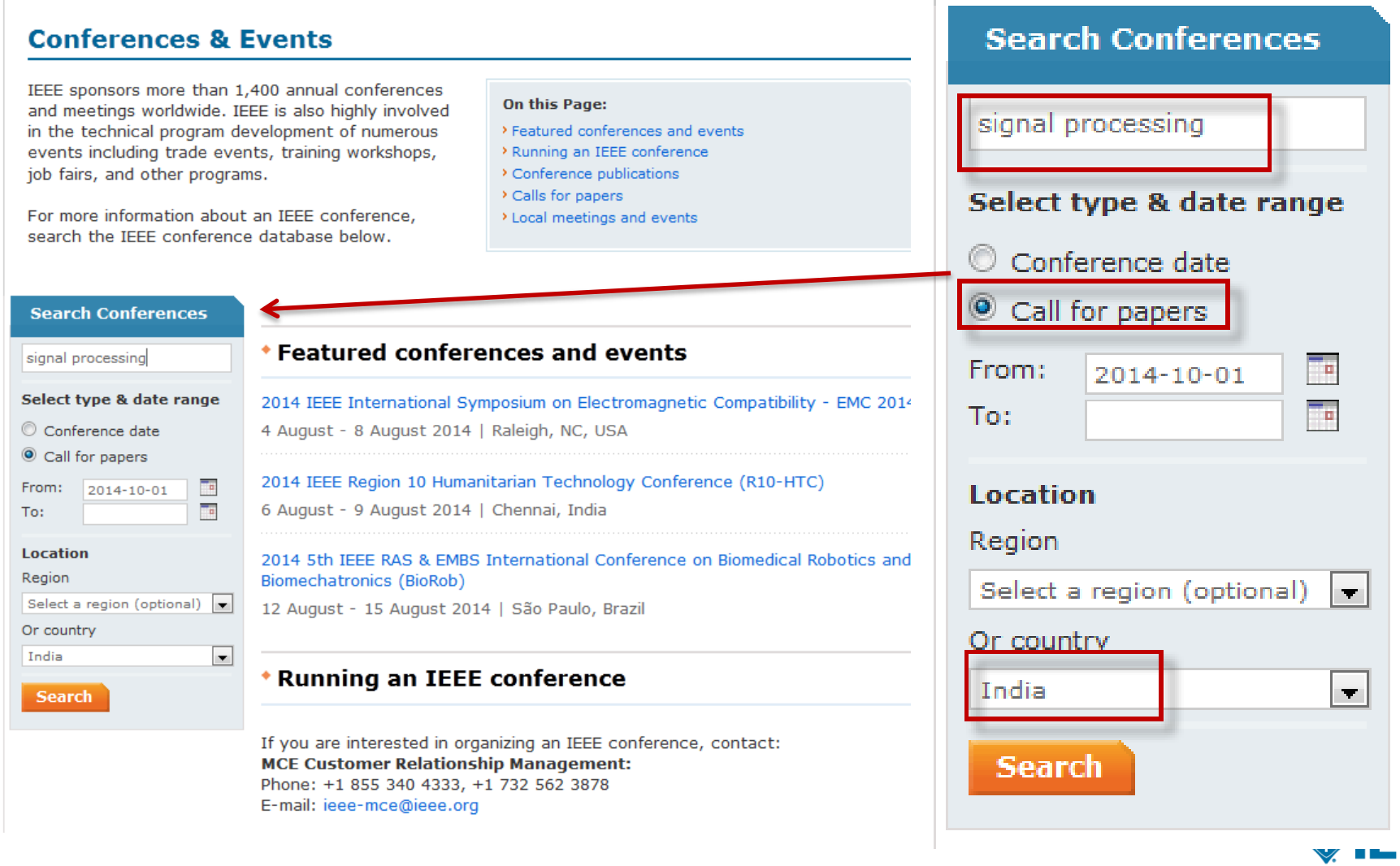
Final Steps

Find the right publication and submit your paper

- Identify relevant journals
- **Browse conference calls for papers**
- Submit your paper

IEEE Advancing Technology for Humanity

Finding Conference Calls for



http://www.ieee.org/conferences_events/index.html

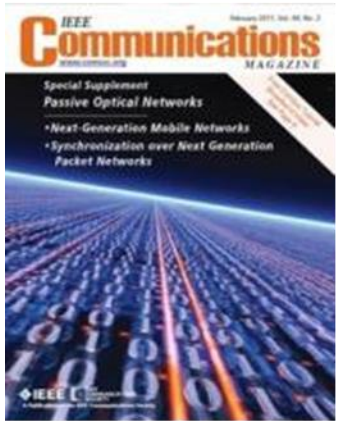
IEEE
Advancing Technology for Humanity

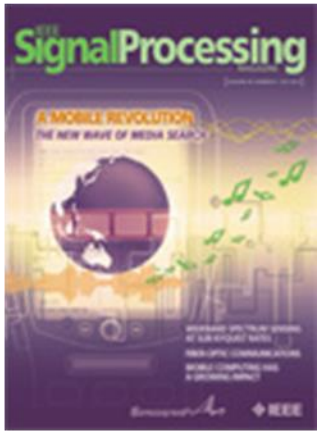
Prepare

Final Steps

Find the right publication and submit your paper

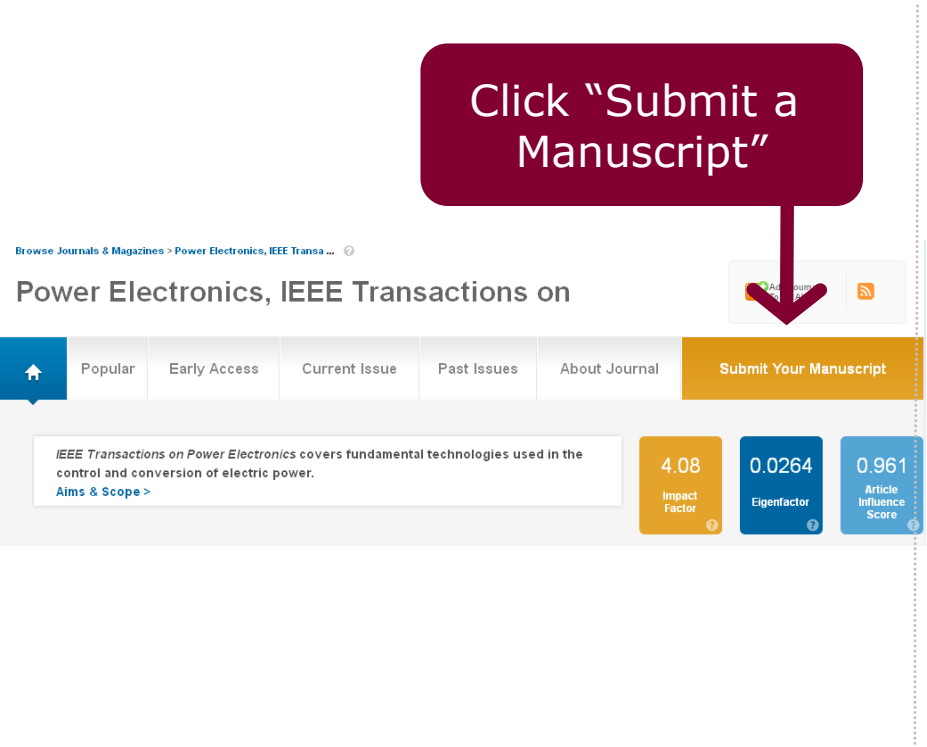
- Identify relevant journals
- Browse conference calls for papers
- **Submit your paper**

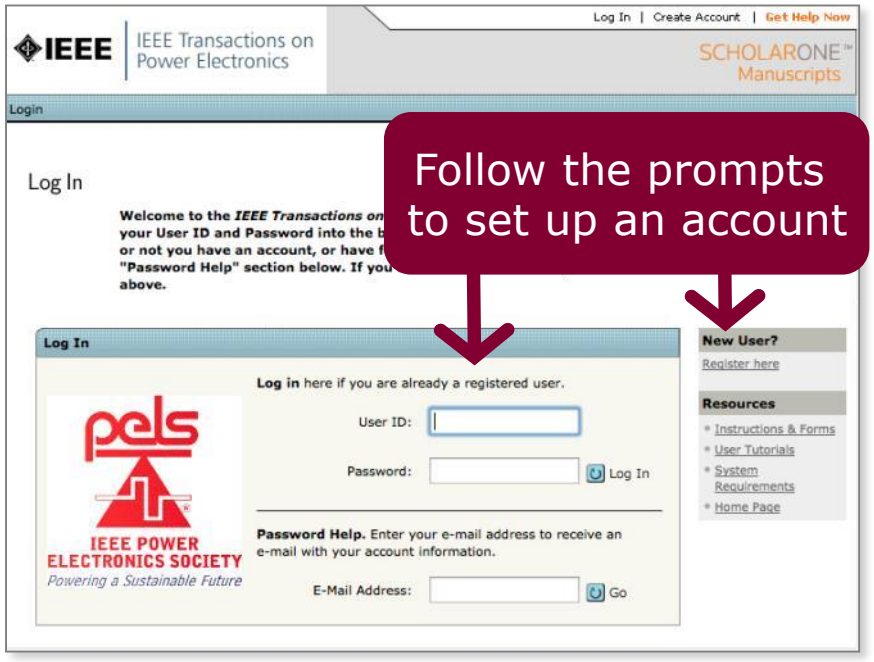




Submit

Journal paper submission is easy through *IEEE Xplore®*



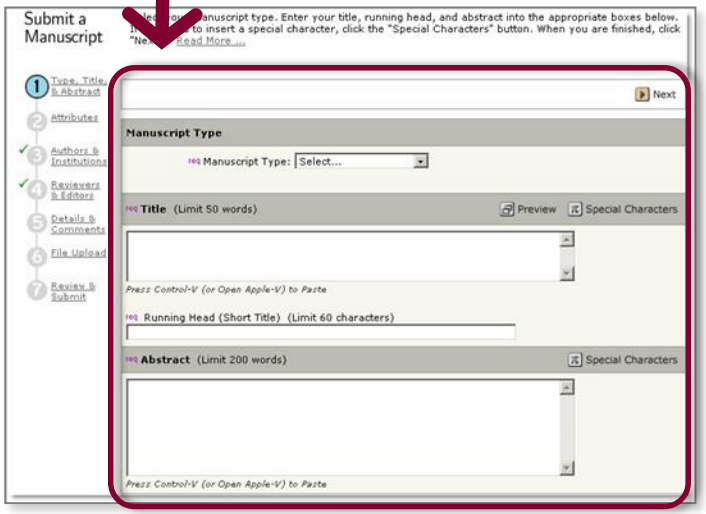


IEEE Advancing Technology for Humanity

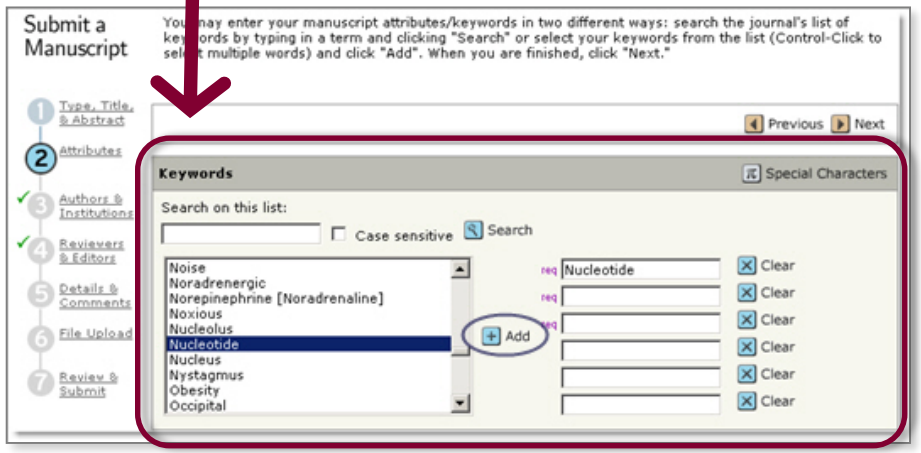
Submit

To submit an article, follow the on-screen directions

1 Type, Title & Abstract



2 Attributes / Keywords

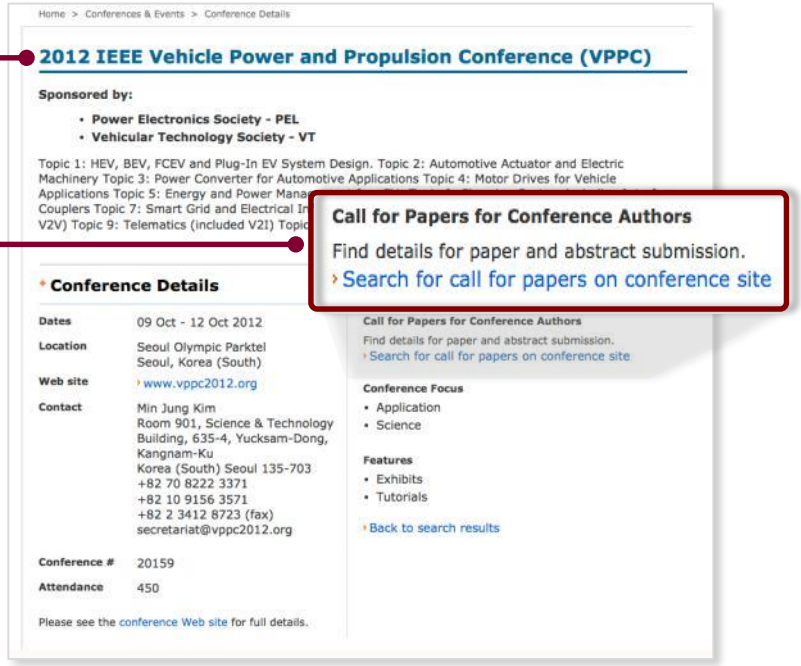


IEEE Advancing Technology for Humanity

Submit

Use conference site (not IEEE Xplore) to submit to a conference

For complete information, see the Call for Papers for the conference in question.



Each IEEE sponsored conference has its own requirements for publishing.

IEEE Advancing Technology for Humanity

Throughout the process, refer to the IEEE Author Digital Toolbox

www.ieee.org/go/authorship

Author Digital Tool Box

- IEEE Publications Menu
- Publications Home
- Publications News
- Publication Types
- Publishing Tools & Services
- Reprints, Rights & Permissions
- Advertising in IEEE Publications
- Publications Board
- Author Resources
- Contact IEEE Publishing
- Author FAQs

IEEE author digital toolbox

The IEEE Author Digital Toolbox contains tools and information to assist with article preparation and submission, the article proof review process, and ordering reprints. Also included is a list of frequently asked questions.

On this Page:

Preparing your article

IEEE Style Manual
(PDF, 132 KB)
A manual outlining editorial guidelines for IEEE Transactions, Journals, and Letters.

IEEE Abbreviations for IEEE Transactions, Journals, Letters, and Magazines
(PDF, 728 KB)
A catalog of IEEE's titles, including historic publications, along with their official reference abbreviations, and acronyms.

Keywords Suggested for Authors
(PDF, 326 KB)
Authors are encouraged to select keywords from this list. It comprises the first three hierarchical "levels" under each term-family (or branch) that is formed from the top-most terms of the IEEE Thesaurus. If you cannot find appropriate terms, you may add your own.

Article Templates

Authorship

- View benefits of publishing with IEEE

IEEE Open Access

IEEE Open Access delivers articles free of charge to readers worldwide.

- Learn about IEEE Open Access

Which journal would be right for my research?

- View a complete listing of IEEE periodicals

Article Templates

- Find the appropriate template for the publication you intend on publishing in

Author copyright help

- IEEE Rights & Permissions Department
- Download the IEEE Copyright Form (PDF,108 KB)

Author FAQs

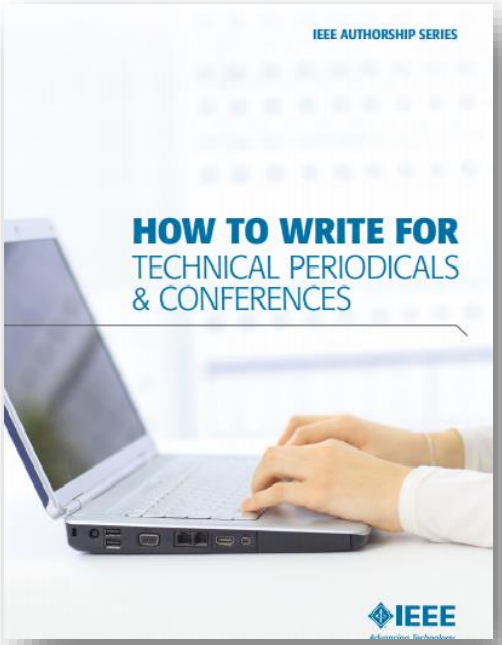
- Answers to many of your most commonly asked questions about how to publish a paper with IEEE

IEEE
Advancing Technology for Humanity

IEEE Author Guide Always Available

www.ieee.org/go/authorship

- Authors learn how to prepare, write, and submit quality technical articles.
- Can be downloaded
- Includes embedded links to information, forms, etc.



For more information or to download: http://www.ieee.org/publications_standards/publications/authors/publishing_benefits/index.html?WT.mc_id=pb_ben_pub

Key sites to remember

www.ieee.org/go/authorship

IEEE Author Tools
http://www.ieee.org/publications_standards/publications/authors/author_tools.html

IEEE Conference Search and Calls for Papers:
http://www.ieee.org/conferences_events/index.html

IEEE Xplore: http://ieeexplore.ieee.org

IEEE Xplore information, training and tools:
http://www.ieee.org/go/clientservices

IEEE Journal Citation reports:
http://www.ieee.org/publications_standards/publications/journmag/journalcitations.html

IEEE
Advancing Technology for Humanity

Thank you for your time today

www.ieee.org/go/authorship