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New IEEE Journals for 2018

IEEE Letters of the Computer Society

A rigorously peer-reviewed forum for rapid publication of brief articles describing high-impact results in all areas of interest to the IEEE Computer Society.

IEEE Control Systems Letters

Peer-reviewed brief articles that provide a rapid and concise account of innovative ideas regarding the theory, design, and applications of all aspects of control engineering.

IEEE Sensors Letters

Articles on the theory, design, fabrication, manufacturing, and application of devices for sensing and transducing physical, chemical, and biological phenomena, with emphasis on the electronics and physics aspects of sensors and integrated sensor-actuators.

IEEE Solid-State Circuits Letters

A monthly publication of original and significant contributions in the area of solid-state circuits. The emphasis is on the transistor-level design of integrated circuits (ICs). Circuits integrated in micro- and nano-electronic (e.g., VLSI) technologies are of principal interest.

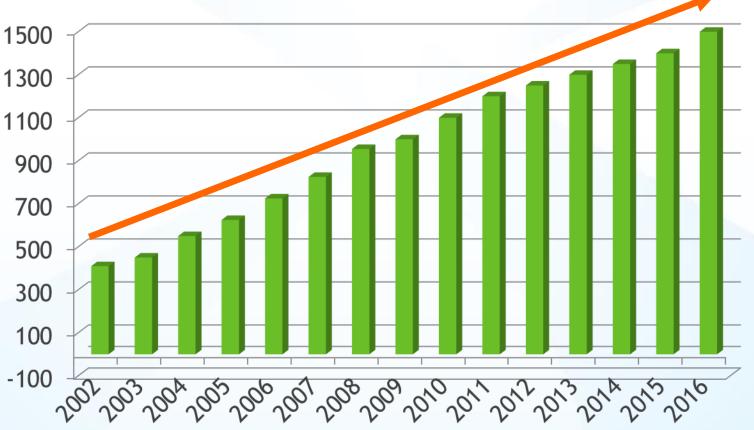




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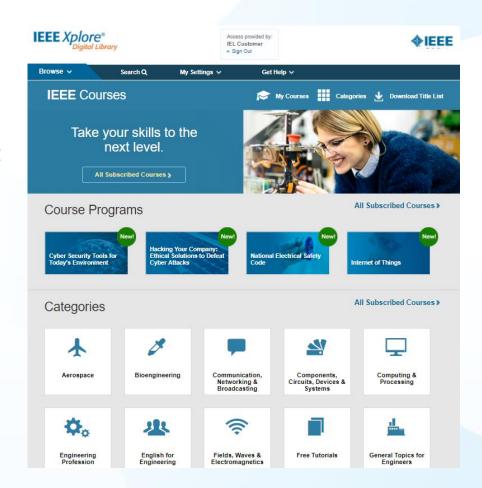


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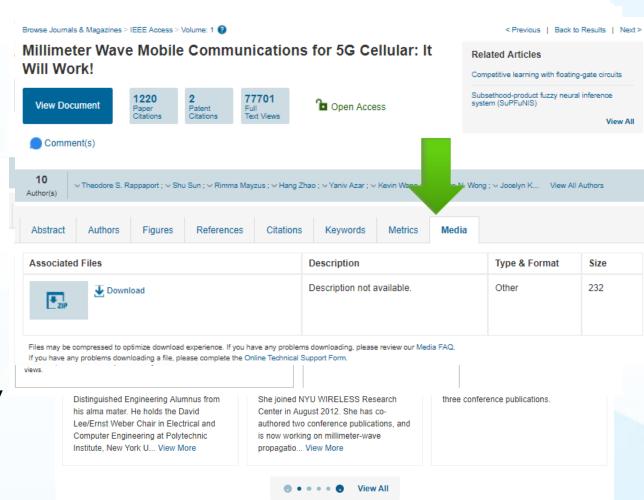






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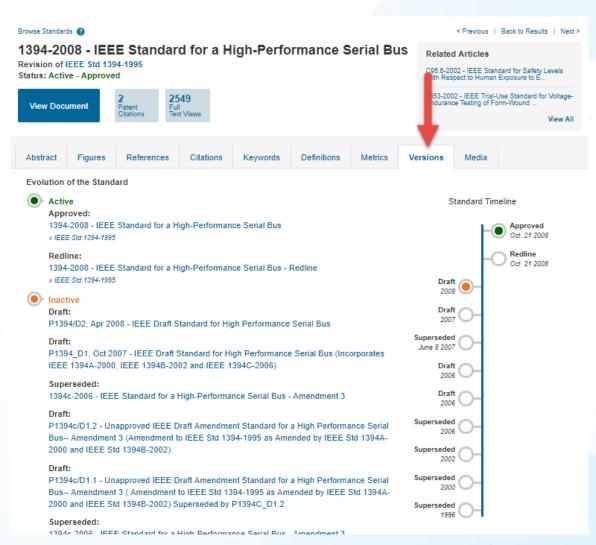
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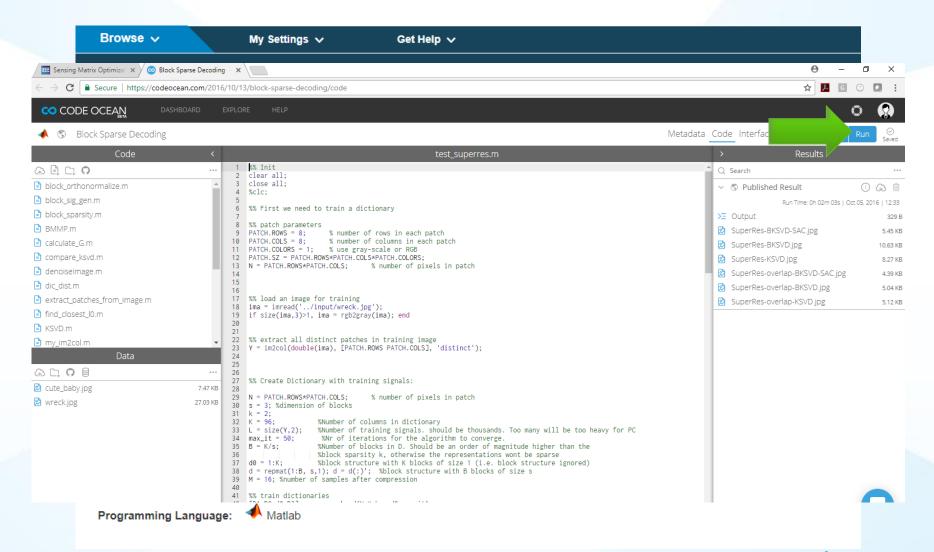
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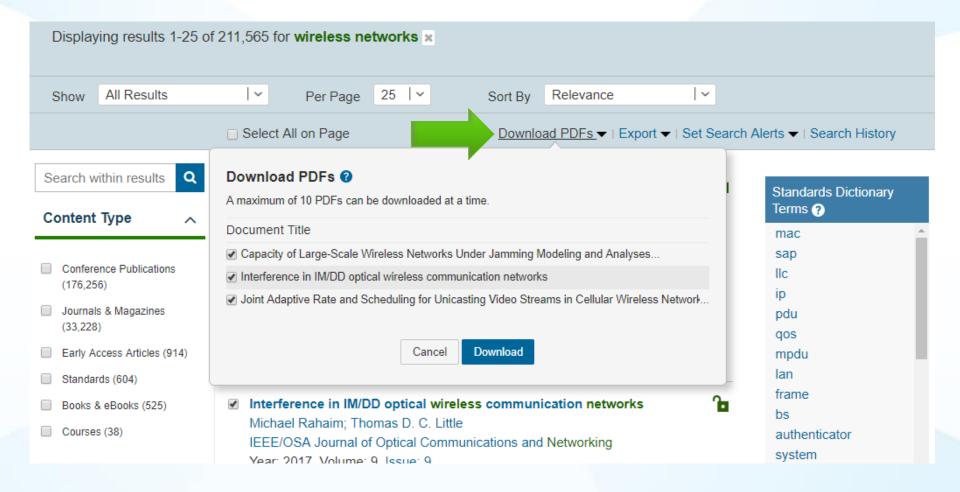


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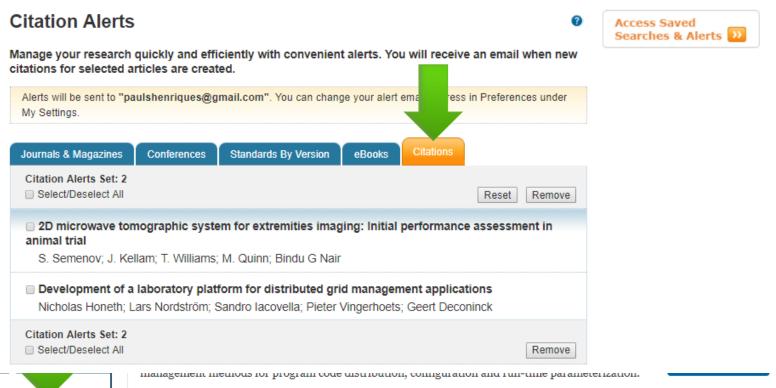


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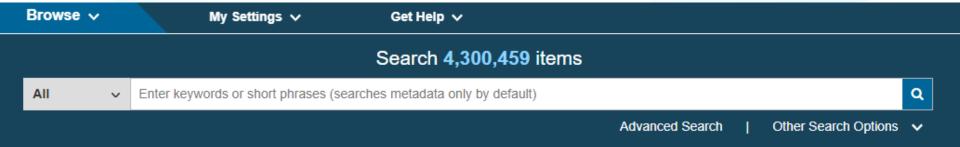
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A characteristic of DER is that the types of equipment and control and monitoring interfaces used exhibit a wide diversity which can depend on factors such as vendor preference and locale. This has the implication that distributed grid management application development platforms must be designed to deal with a heterogeneous profile of connected devices while still maintaining a common internal representation of information between application nodes.

The use of simulation platforms allows researchers to evaluate the functionality and performance of applications on simulation models. Such models are however, often domain-specific and require



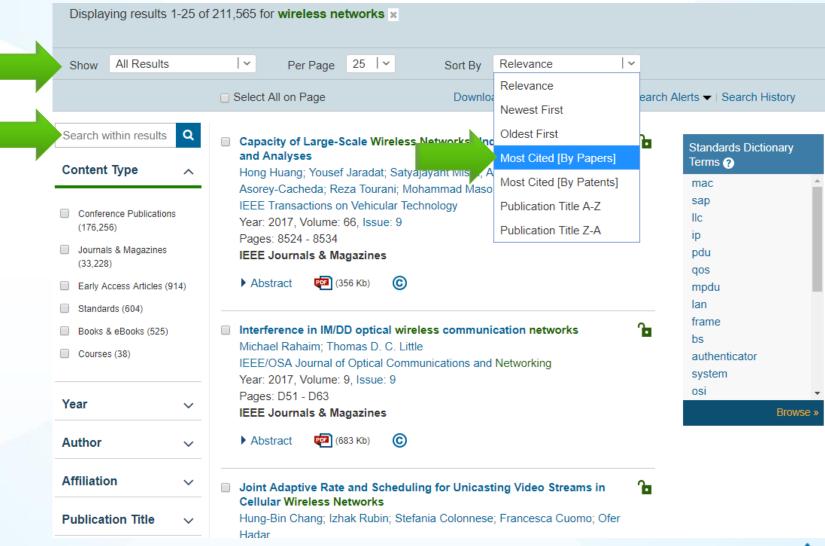
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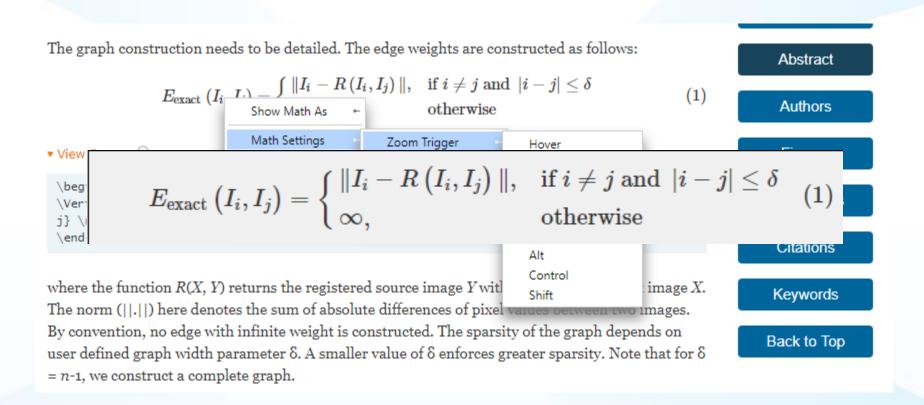


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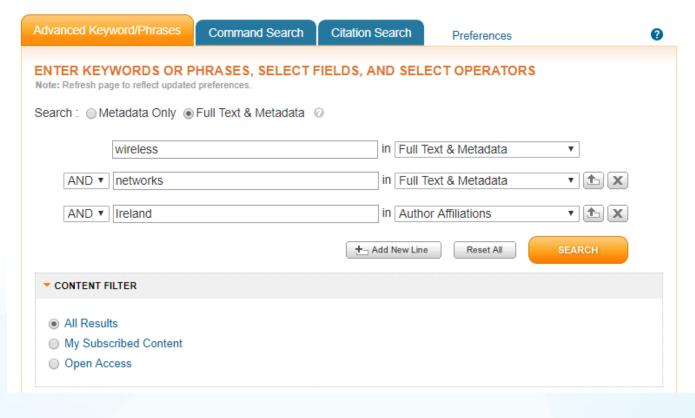
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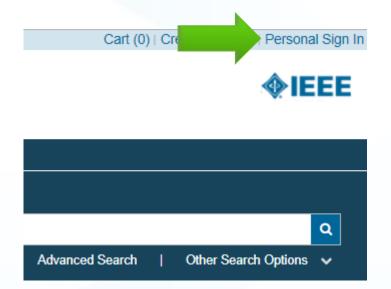
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Issue

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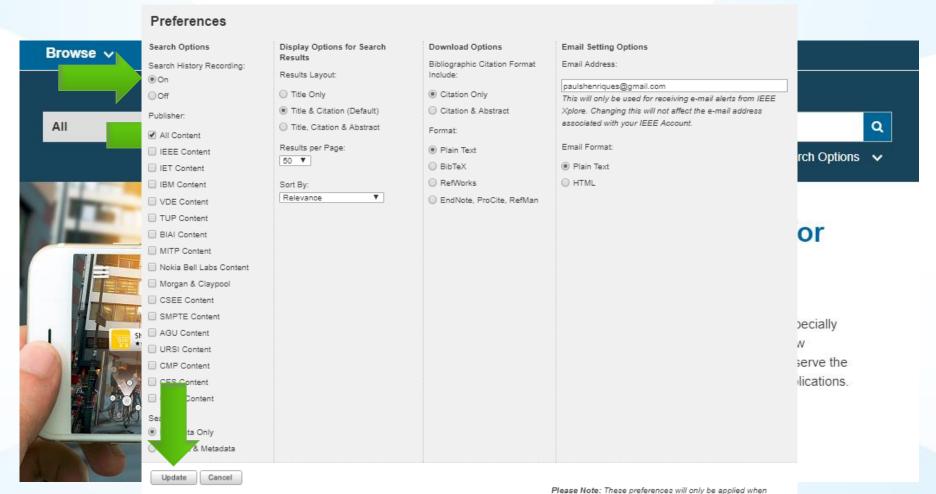


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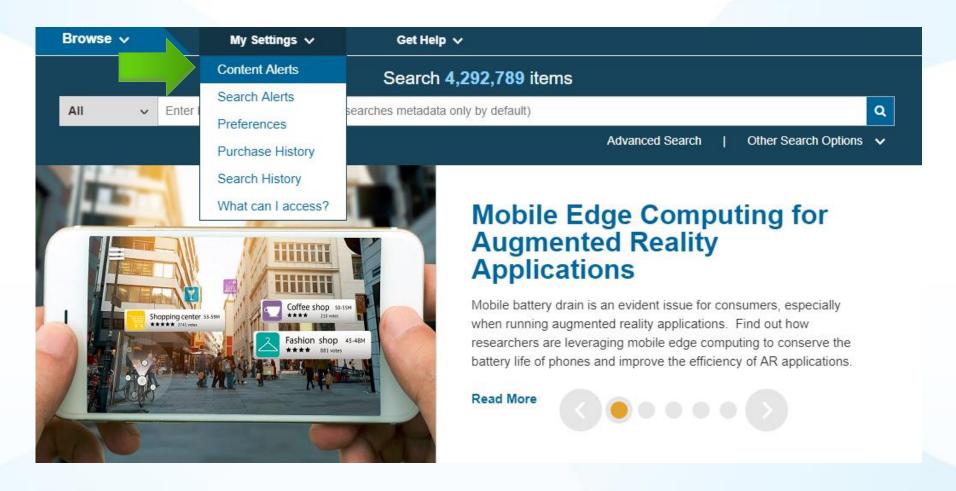
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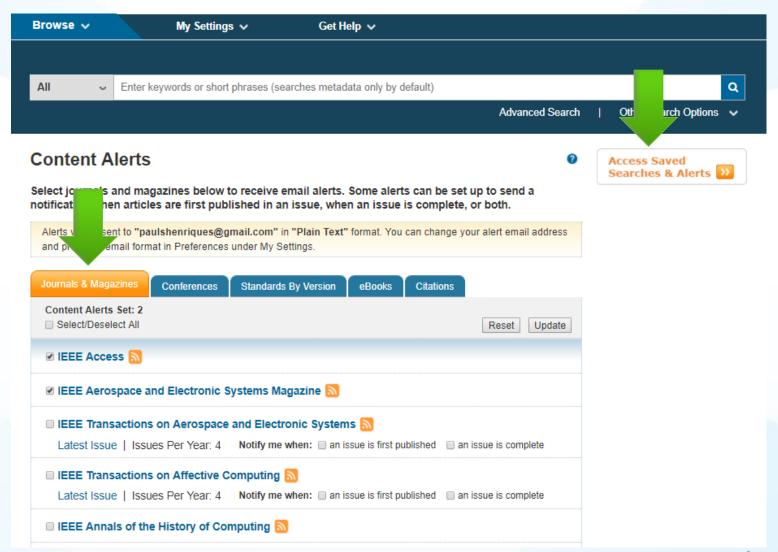


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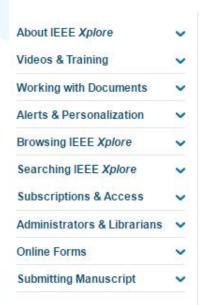


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Resources & Help Section: Tutorials



Resources and Help

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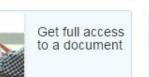


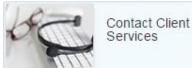
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IEEE Author Resources



Quality of IEEE Content

IEEE peer review: Process in which a journal article or conference paper is submitted by the prospective publisher to experts in the field for critical evaluation prior to publication, a standard procedure in scholarly publishing. Synonymous with refereed or juried review.

Key questions

- Is the science accurate?
- Does the paper make a unique contribution to the "body of knowledge?"

Assures credibility and authority of content

Beyond news, trade sources and open web content

Most frequently cited content in technical literature and in patents



IEEE Journal or IEEE Conference?

Journal article: Fully developed presentation of your work

- Original research presented
- Clear conclusions are made and supported by the data

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



What IEEE editors and reviewers are looking for

- Content that is appropriate, in scope and level
- Clearly written original material that addresses a new and important problem
- Extension of previously published work (author MUST inform editor if submitting previously published work and how it differs)
- Valid methods and rationale
- Illustrations, tables and graphs that support the text
- References that are current and relevant to the subject



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How does the review process work?

- Editor-in-Chief (EIC) receives paper after it goes through content match check (iAuthenticate) and banned author check
- If the paper is in scope for the journal, it is assigned to an associate editor
- Associate editor assigns paper to five or more reviewers (reviewers can be suggested by authors)
- Reviewers send comments back to the associate editor
- Associate editor makes recommendation to the EIC as follows:
 - Accept
 - Revise & Resubmit
 - Reject
- The EIC makes final decision and informs the author



Why IEEE editors and reviewers reject papers

- Content is not a good fit for the publication
- Serious scientific flaws:
 - Inconclusive results or incorrect interpretation
 - Fraudulent research
- It is poorly written or quality is not good enough for journal
- The work does not address a big enough problem or advance the scientific field
- The work was previously published
- Work was submitted to multiple publications
- Reviewers have misunderstood the article

Refer to the IEEE guide on ethical publishing:

http://www.ieee.org/publications standards/publications/authors/plagiarism and multiple submissions.pdf

Type of Journals

- Traditional Journals
 - Users/libraries pay for access
- Open Access Journals
 - Author pays
 - Free download
 - Three options: Multidisciplinary mega journal, 100+ hybrid journals, fully Open Access topical journals
 - http://open.ieee.org
- Hybrid Journals
 - Most articles are traditional, some are open access (author preference)



Open Access: Emerging Trends

- EU preference is for Open Access: green or gold OA is acceptable
- Open Access deposit accounts gaining traction across EU to help students fund their work
- Authors can now add Funding Agency field to their published work
- Search by Funding Agency field in Advanced Search

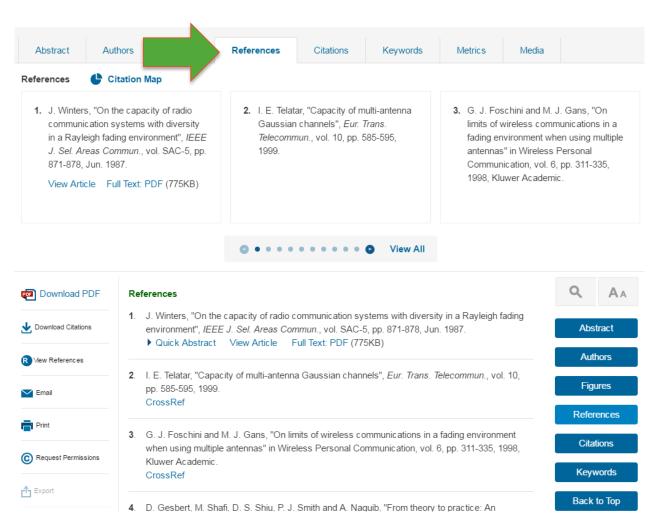
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Using references and citations

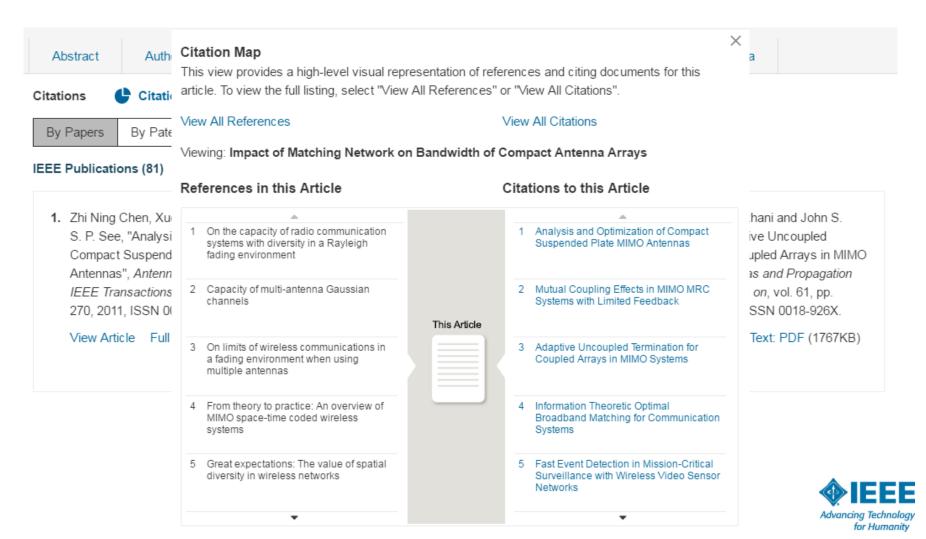
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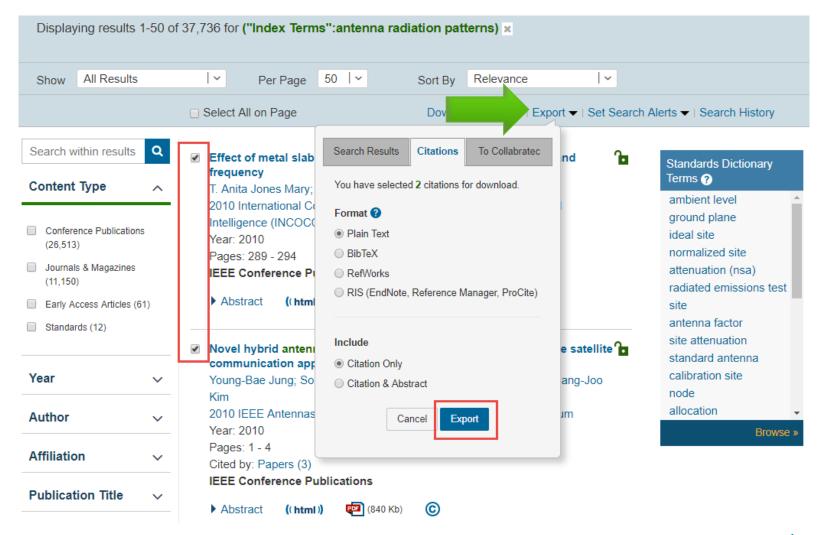




Citation Map: See References & Citing Documents in One View

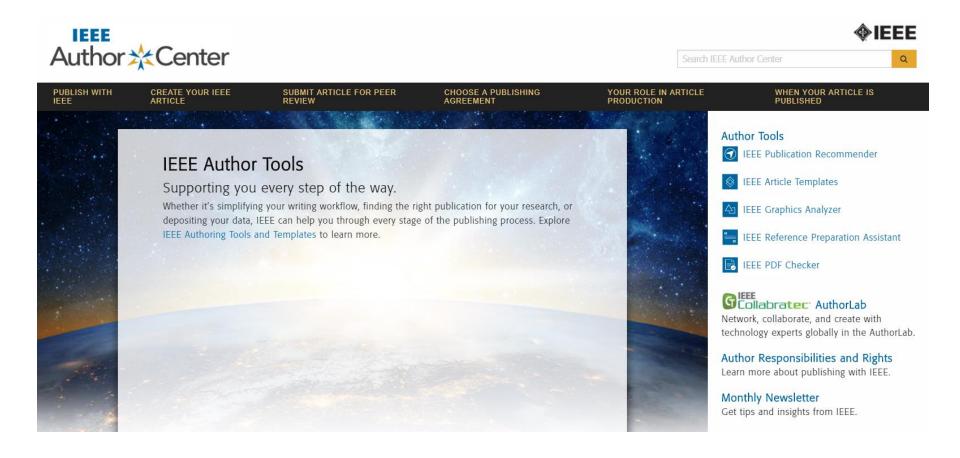


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| Submission to Publication in <i>Xplore</i> : | Not yet available |
| Issues per year: | 6 |

IEEE Communications Society



Narro (Optional)

Choos

Both Pe Periodi Confere

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· Communication, Networking & Broadcasting

· Computing & Processing

Aims & Scope:

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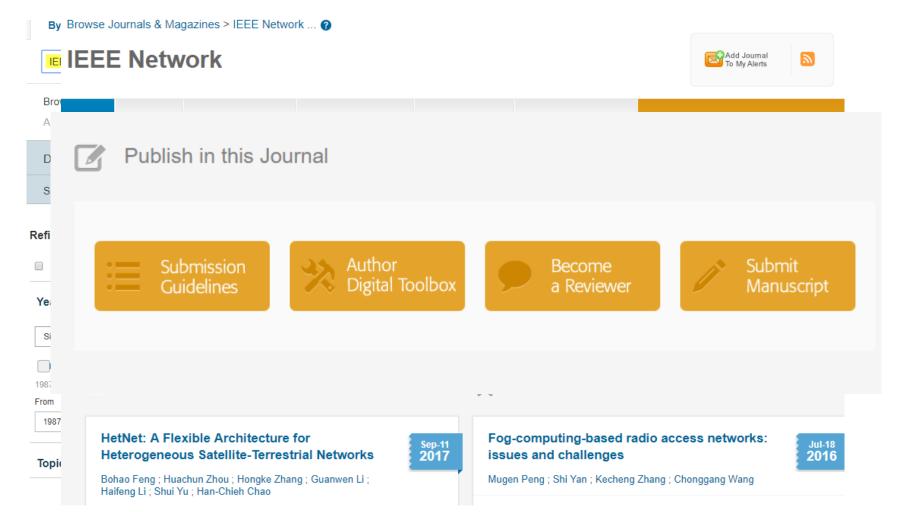
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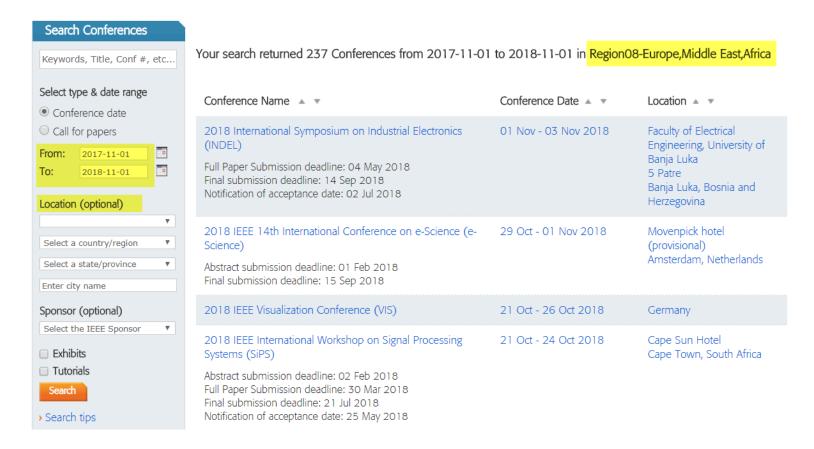


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Finding Conference Calls for Papers

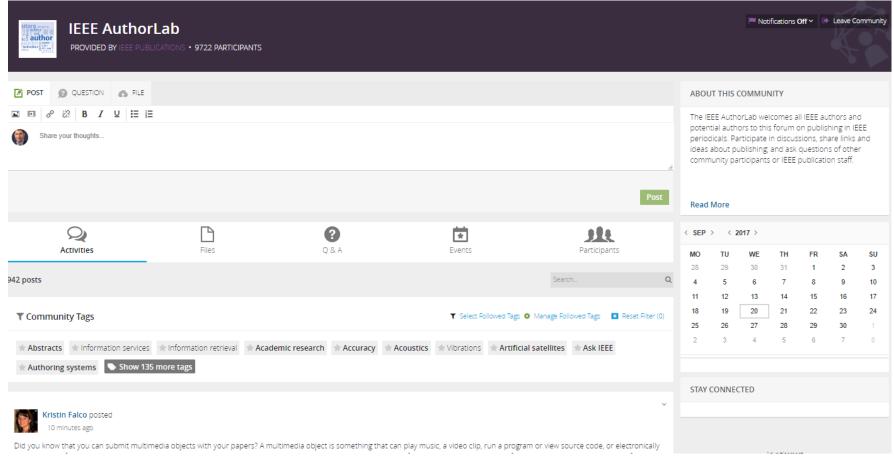
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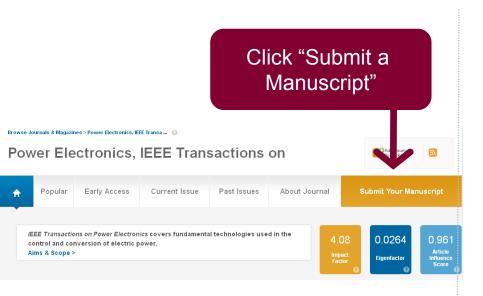


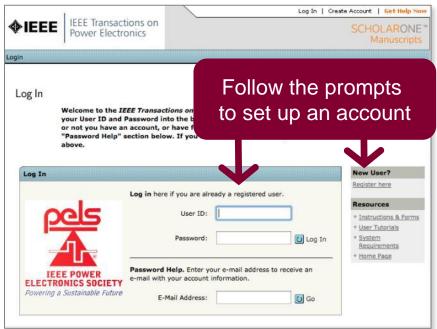
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Journal paper submission is easy through *IEEE Xplore*



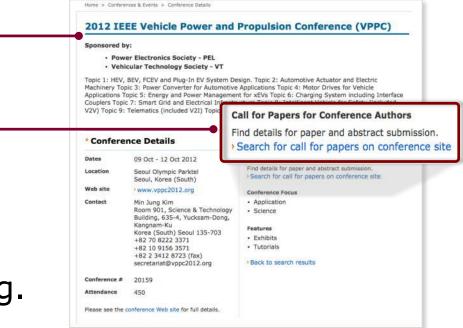




Use conference site (not IEEE Xplore) to submit to a conference

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

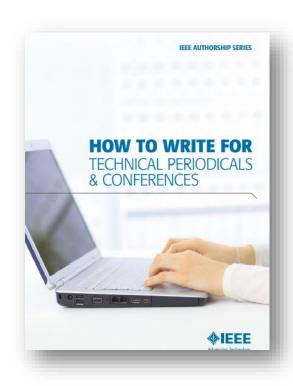
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IEEE Author Guide

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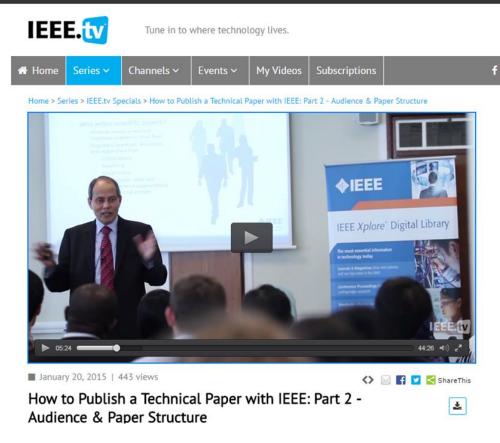
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IEEE *Xplore*:

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IEEE *Xplore:*Patent Search Tips



Agenda

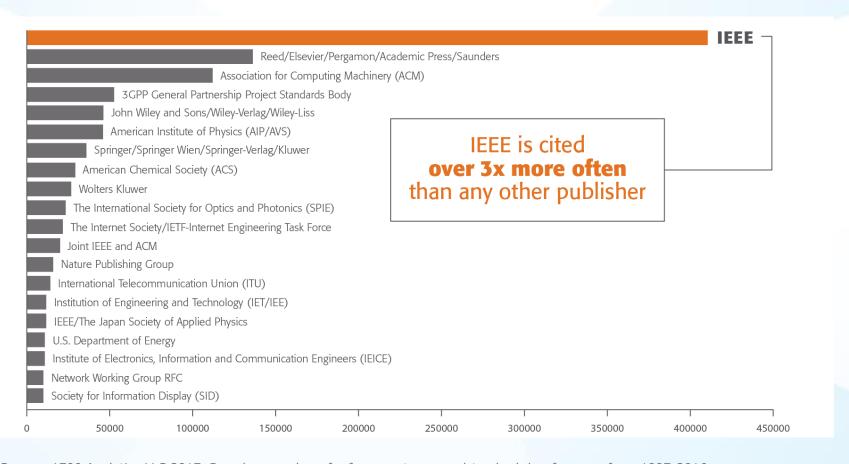


- What is "prior art?"
- What is patentable & types of patents
- Objective of patent searching
- Patent claims and their relevancy to a search
- Search strategies in IEEE Xplore
- Image searching and other useful Xplore tools
- Other patent resources



IEEE Research Powers Patents

Top 20 Publishers Referenced Most Frequently by Top 40 Patenting Organizations



Source: 1790 Analytics LLC 2017. Based on number of references to papers/standards/conferences from 1997-2016



Technologies where patents cite IEEE the most

Battery

Computer hardware

Computer software

Information storage

Measuring, testing, and control

Medical devices

Nuclear and X-ray

Optics

Power systems

Robotics

Semiconductors

Smart Grid

Solar/ Photovoltaic

Telecommunications

Wind Energy



What is "Prior Art?"



- Information publicly available which is relevant to a patent or patent application's claim of originality
- Must be published in print or electronically before the filing date of the patent application under review
- Encompasses technology that was known before and relevant to a patent's claims of originality
- Earlier filed and unpublished patent applications can qualify as prior art



Examples of Prior Art





What is Patentable?

Criteria for an invention to be patentable:

- Novelty: must be new and unique
- Utility: capable for at least one industrial purpose
- Non-obvious: should have a technical advance or economic significance





What is Not Patentable?



- Inventions which are not new
- Inventions which are obvious variations of known technology
- Abstract ideas (no practical purpose or limit to a specific technology, a fundamental truth, original cause, or motive)



Three Types of Patents

- Utility Patent: Granted for a process or method, machine, manufactured article or composition or matter
- Design Patent: Granted for new, original or ornamental design for an article of manufacture. Appearance is protected.
- Plant Patent: granted for new, asexually reproduced plant



America Invents Act (AIA) - 2011

- The most significant change to the United States Patent System since 1952
- This law transforms the U.S. from a "first to invent" to a "first to file" patent system
- Applications filed on or after March 16, 2013 have rights under the "first to file" provision





Reasoning For Prior Art Searching

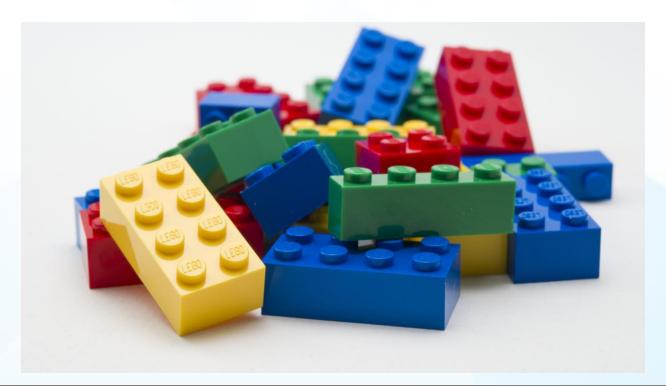
- Ensure the idea is new
- Increase awareness of the product
- Prepare for legal consultation
- Reduce patent attorney and patent agent fees
- Prepare for the application process





Building a search strategy

- Start broad, then narrow down with refining terms
- Seek key terms in abstract, claims and specifications
- Gather synonyms related to key terms

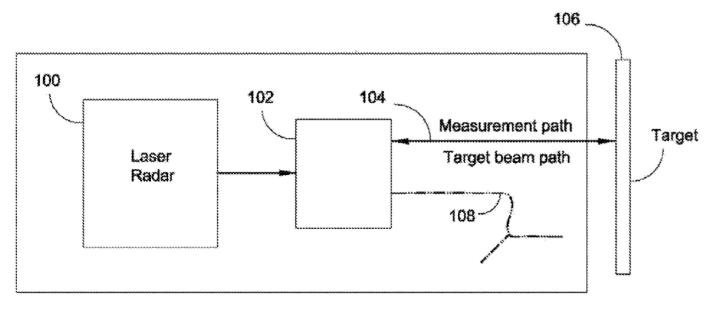




Example:

"Optical assembly for laser radar"

(US Application 20130194563)





Breaking it down...

What is the invention?

Optical assembly for laser radar system

What does it do?

Compact optical assembly that moves in tandem with a laser radar system. Eliminates need for large scanning mirror.

How does it do it?

Assembly comprises a light source, a lens, a scanning reflector and a fixed reflector. Scanning reflector moves relative to light source, adjusting focus of the beam along the line of sight.

Where to find information in a patent or patent application

- Abstract
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings
- Detailed description of the invention
- Claims
- Specification



Patent Claims

- Claims define boundaries of legal protection conferred by a patent or the protection sought by a patent application
- Claim language defines an idea or invention as unique
- Two types of claims: independent and dependent
- Independent claims stand on their own
- Dependent claims are narrow in scope, relying on one or more claims for further measures towards novelty



Identifying key concepts of the invention

- Read through the abstract and claims to target key concepts
- Oftentimes the novelty of the invention will be found in the last sentence of the abstract
- Be mindful of the independent claims, as they can provide further clues regarding unique aspects of the invention



Target Key Concepts

(57) ABSTRACT

A compact optical assembly for a laser radar system is provided, that is configured to move as a unit with a laser radar system as the laser radar system is pointed at a target and eliminates the need for a large scanning (pointing) mirror that is moveable relative to other parts of the laser radar. The optical assembly comprises a light source, a lens, a scanning reflector and a fixed reflector that are oriented relative to each other such that: (i) a beam from the light source is reflected by the scanning reflector to the fixed reflector; (ii) reflected light from the fixed reflector is reflected again by the scanning reflector and directed along A line of sight through the lens; and (iii) the scanning reflector is moveable relative to the source, the lens and the fixed reflector, to adjust the focus of the beam along the line of sight.



Create a list of synonyms

- Gather a list of synonyms related to key concepts
- Consider brand names, related standards or older terms
- Include alternate spellings of words
- Include acronyms and abbreviations
- Review the specification of the invention at the end of the patent application for explanations of technology employed in the invention
- Exclude terms that are only tangentially related



Example:

"Optical assembly for laser radar"

Optical Laser
Optics Laser beam
Ocular Ray
Lens

Scanning
Check
Inspect
Examine
Screen

Reflector Mirror Glass

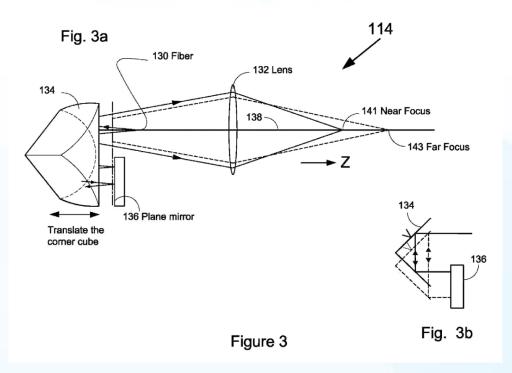


Search strategy

- Gather key concepts, differentiating between nouns, verbs and phrases
- Create concept map to visualize alternate search strings
- Match verbs with nouns. Verbs should be connected to or modify a noun so they are not searched alone
- Example: detect NEAR/5 image (searches detect within five words of image)
- Start broad and narrow down with refining terms
- Be mindful of the application's publication date. Set appropriate date limits for each search to make sure the prior art found predates the application.

Search strategy

- EXAMPLE: Optical assembly for laser radar
- MAIN CONCEPT: Radar
- SECONDARY CONCEPT: optical assembly, scanner, laser





Advanced Search: Example

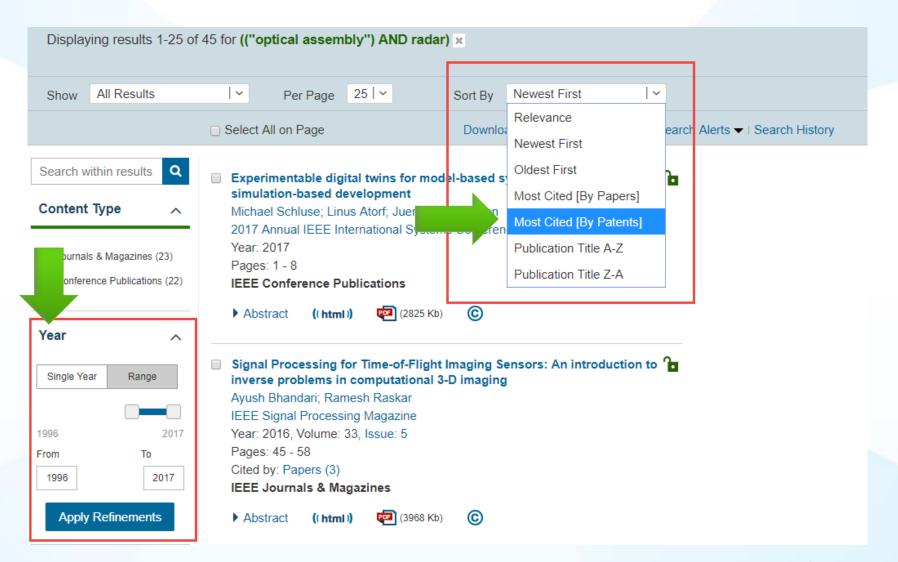
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Abstract:

The Internet of Things (IoT) shall be able to incorporate transparently and seamlessly a large number of different and heterogeneous end systems, while providing open access to selected subsets of data for the development of a plethora of digital services. Building a general architecture for the IoT is hence a very complex task, mainly because of the extremely large variety of devices, link layer technologies, and services that may be involved in such a system. In this paper, we focus specifically to an urban IoT system that, while still being quite a broad category, are characterized by their specific application domain. Urban IoTs, in fact, are designed to support the Smart City vision, which aims at exploiting the most advanced communication technologies to support added-value services for the administration of the city and for the citizens. This paper hence provides a comprehensive survey of the enabling technologies, protocols, and architecture for an urban IoT. Furthermore, the paper will present and discuss the technical solutions and best-practice guidelines adopted in the Padova Smart City project, a proof-of-concept deployment of an IoT island in the

Abstract:

The fastening construction of the main mirror of a high lidar is presented in this paper. Lidar is light radar that consists of the light emission source and receiver of the reflected light signal. Lidar design is as done as follows. Optical axes of the receiver and light emission source don't change position relative to the motionless base because it is worthwhile to simplify the main mirror fastening construction. Three supports regulated on height are placed on the base. These supports are situated on tops of the equal sides of the triangle. Unloading is made on six points, each one of the support holds equal arm level. Balls are placed on the end of the levels in the slots. Small thickness ring with small rigidity is placed on the balls. A rubber laying downward to sideward is glued on the back side of the ring. While putting the mirror on the supports system, the leveling of the load from the mass on the backside of the mirror surface is also done. Radial fastening and unload make as followers: the cut ring is based on the mirror through rubbery laying of screws moved in pillar slots after mirror adjustment. The height of the crimped lock relative to the mirror face must provide radial mirror unloading. Suggestial construction allows reducing labour content of manufacturing and assembly.

Published in: Science and Total ology, 2004. KORUS 2004. Proceedings. The 8th Russian-Korean International Symposium on

Date of Conference: 26 June-3 July 2004 INSPEC Accession Number: 8690532

Date Added to IEEE *Xplore*: 19 December 2005 **DOI**: 10.1109/KORUS.2004.1555682

▶ ISBN Information: Publisher: IEEE

Conference Location: Tomsk, Russia



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Laser-Based Head-Tracked 3D Display Research



Paper Citations 6 Patent Citations 760 Full Text Views



Author(s)

▼ Rajwinder Singh Brar; ▼ Phil Surman; ▼ Ian Sexton; ▼ Richard Bates; ▼ Wing Kai Lee; ▼ Klaus Hopf; ▼ Frank Neumann; ▼ Sally E. ... View All Authors

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Abstract:

The construction and operation of two laser-based glasses-free 3D (autostereoscopic) displays that have been carried out within the European Union-funded projects MUTED and HELIUM3D is described in this paper. Both use a multi-user head tracker to direct regions viewer's referred to as exit pupils to viewer's eyes. MUTED employs a direct-view LCD whose backlight comprises novel steering optics and in HELIUM3D image information is supplied by a horizontally-scanned fast light valve whose output is controlled by a spatial light modulator (SLM). The principle of operation, construction and results obtained are described.

Published in: Journal of Display Technology (Volume: 6, Issue: 10, Oct. 2010)

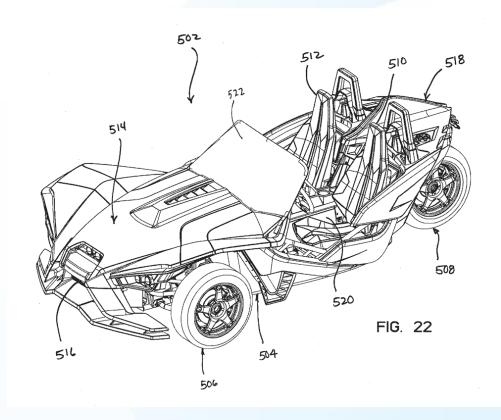
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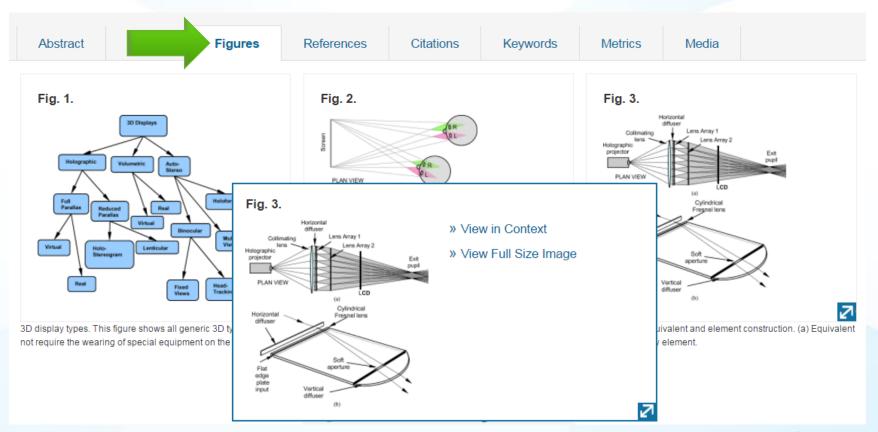
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Lighting control

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three-dimensional displays, laser beam applications, liquid crystal displays, spatial light modulators, stereo image processing, target tracking

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LCD, laser-based head tracking, 3D display research, laser-based glasses-free 3D displays, autostereoscopic displays, European Union-funded projects,

MUTED. multiuser head tracker.

HELIUM3D image information,

horizontally-scanned fast light valve ...

Author Keywords

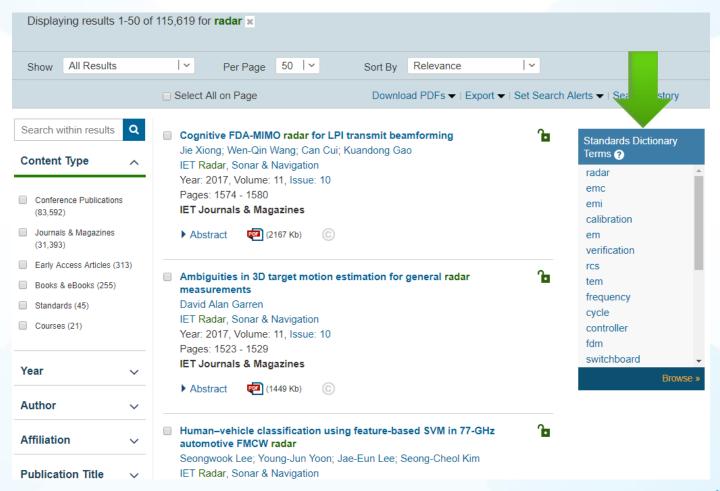
three-dimensional (3D) display, Autostereoscopic, head-tracking, liquid crystal on silicon (LCOS), RGB laser

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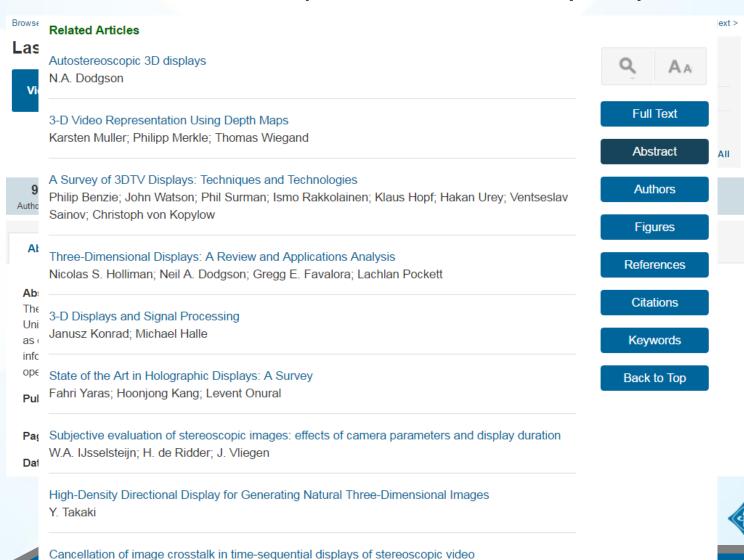
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 P. Benzie, J. Watsor Rakkolainen, K. Hor Sainov, C. von Kopy 3D TV displays: Tec technologies", IEEE Syst Video Technol. pp. 1647-1658, Nov

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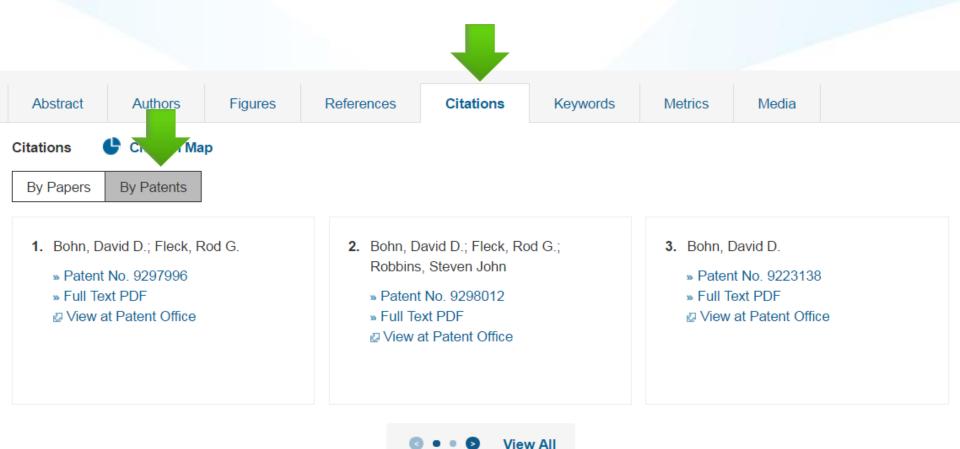
. J. Schwarz, --Dimensional Display boken:Wiley, 2000.

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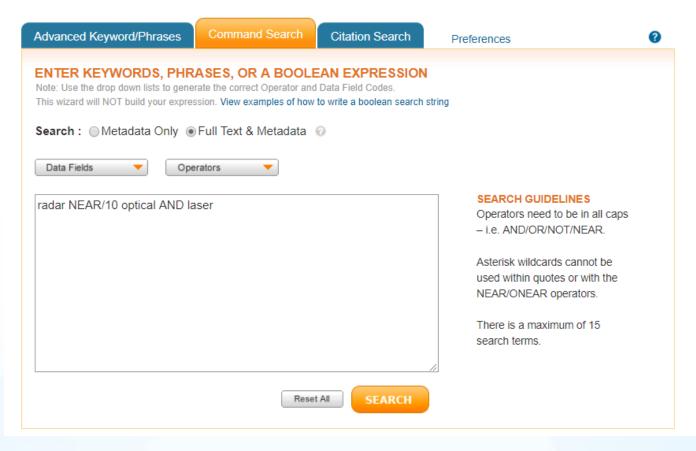
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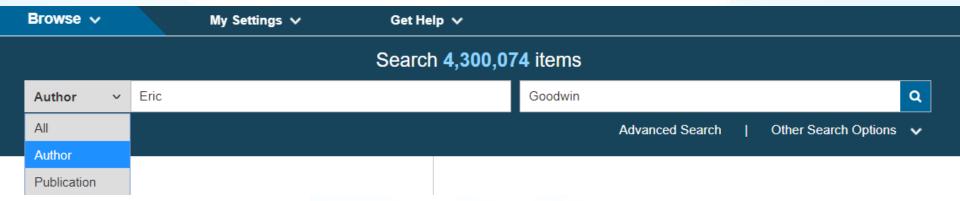


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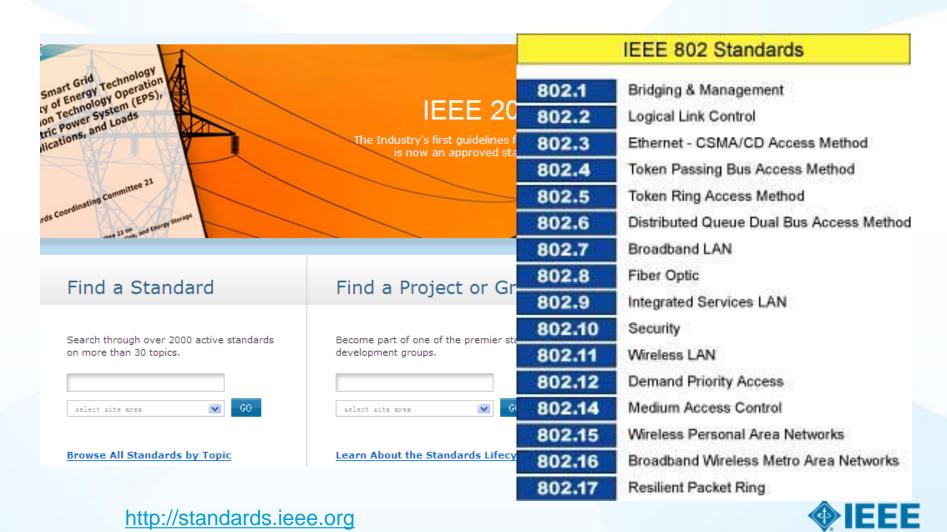
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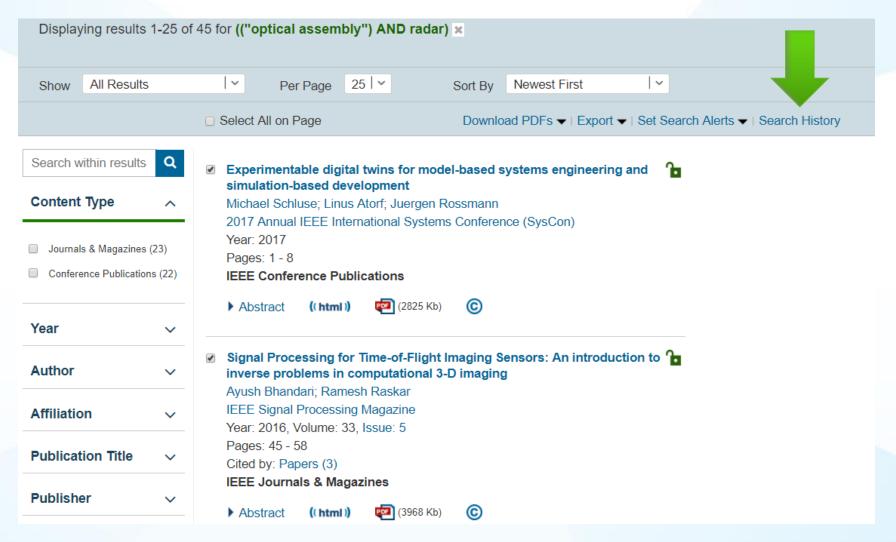


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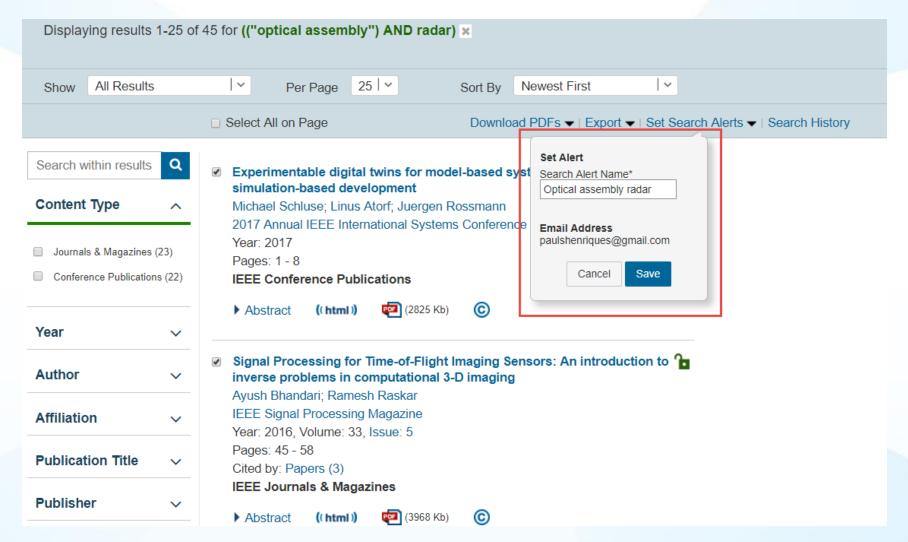
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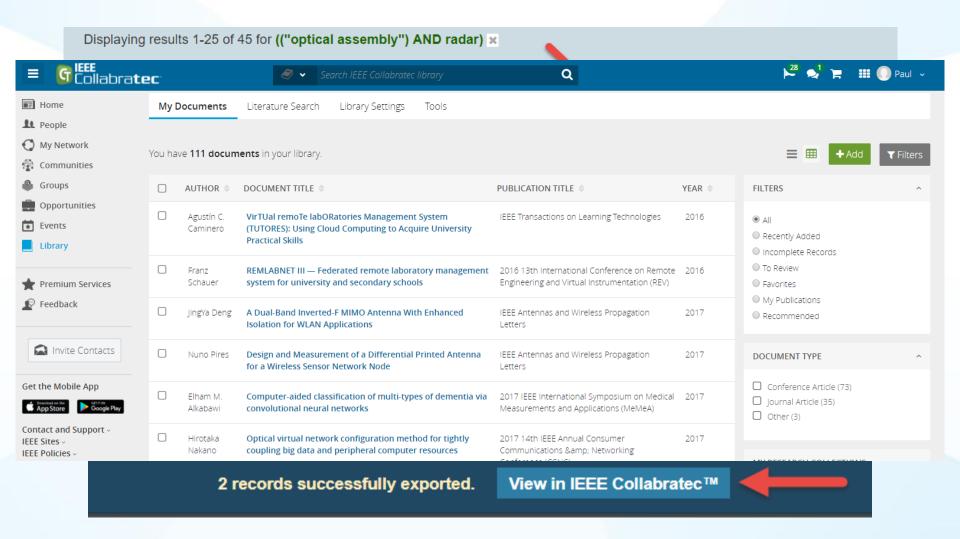


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