

# Techniques for effective searching with IEEE Xplore

Eszter Lukács

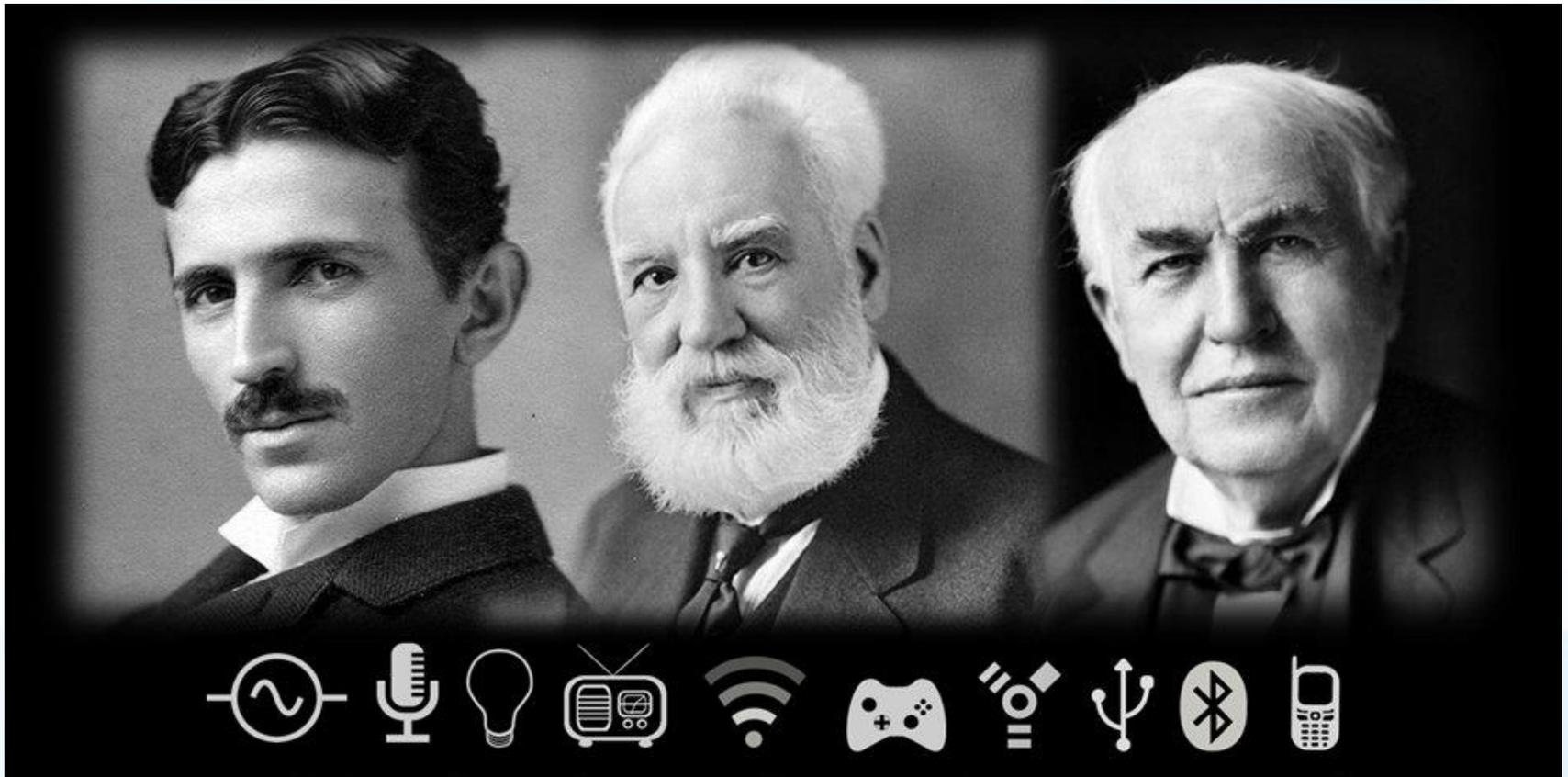
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**IEEE Xplore**<sup>®</sup>  
*Digital Library*



# 1884: Where we came from



# About the IEEE

- World's largest technical membership association with more than 430,000 members in over 160 countries
- Not for profit organization “Advancing Technology For Humanity”
- Four Core areas of activity
  - Membership organization
  - Conferences organizer
  - Standards developer
  - Publisher of journals, conferences, standards, ebooks and elearning
- IEEE *Xplore* by the numbers:
  - Nearly 4 million total documents
  - Over 3 million unique users
  - More than 8 million downloads per month
  - 15 year anniversary in 2015!



IEEE student volunteers in Mumbai



IEEE Day Contest Winner, Colombia

# Career Development Resources and Opportunities for student members

## IEEE Job Sites and Career Alerts

- ❑ Locate career opportunities easily and confidentially
- ❑ Weekly email newsletter containing career advice

## IEEE Xplore

- ❑ Learn to use IEEE Xplore for company, career, and job related searches

## Awards, Fellowships & Scholarships

- ❑ Recognizes the accomplishments of IEEE members
- ❑ Enhance your resume with an IEEE award

## Conferences

- ❑ Networking and Presenting Opportunities
- ❑ Student Paper Contests

Education Partners Program (EPP-IEEE)



## IEEE Job Site FEATURED JOBS

**Senior Research**  
Athlone, Ireland  
Ericsson Ireland

**Electrical Engineer**  
Palmetto, FL  
ITW GSE Group -  
Triletron

**Electromagnetic  
Research Scientist**  
Champaign, IL  
SAIC

**Automation/Controls  
Engineer (Robotics)**  
Carlsbad, CA 92008  
Callaway Golf  
Company

**Aerospace Engineer**  
Hampton, VA  
SAIC

**Cost Engineer/Cost  
Manager**  
Washington, DC  
20560-0908  
Smithsonian  
Institution

**Staff Equipment  
Engineer**  
Santa Clara, CA  
95128  
Affymetrix, Inc.

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# Prestigious Student Competitions

Think you  
can code?

**IEEE**X**TREME**:  
the 24-hour global programming  
battle for student coders

Prove it.



Worldwide, 24-hour programming challenge  
for IEEE Student Branches

Teams of student members, advised and proctored  
by an IEEE Member, compete in a 24-hour time span against each  
other to solve a set of programming problems.

Top prize is a trip  
**anywhere in the world**  
to the IEEE event of the top team's choice!

Teams registered in 2013:

**1,838**



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# Why you should rely on IEEE information

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# IEEE quality makes an impact

Thomson Reuters Journal Citation Reports® by Impact Factor

## IEEE publishes:

**17 of the top 20** journals in Electrical and Electronic Engineering

**14 of the top 15** journals in Telecommunications

**3 of the top 5** journals in Computer Science, Hardware & Architecture

**3 of the top 5** journals in Computer Science, Cybernetics

**3 of the top 5** journals in Automation & Control Systems

**3 of the top 5** journals in Artificial Intelligence

**2 of the top 5** journals in Imaging Science & Photographic Technology

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 2015 study released June 2016

More info: [www.ieee.org/citations](http://www.ieee.org/citations)

# IEEE/IET Electronic Library (IEL)

Your single source of more than 30% of the world's current literature in electrical engineering, electronics, and computer science.



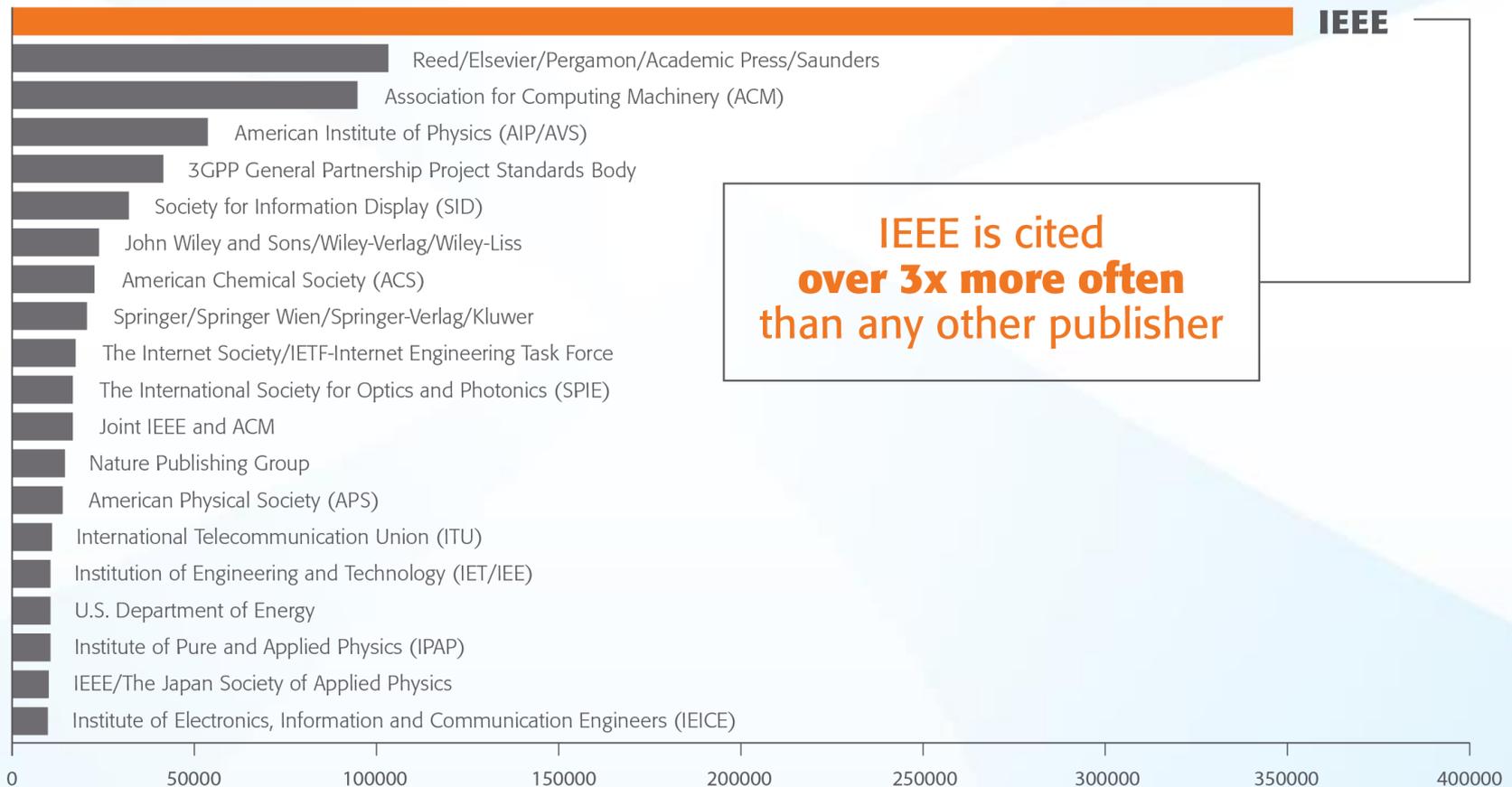
# Full text access to IEEE/IET Electronic Library (IEL)

- More than four million full text documents
- **180 IEEE journals & magazines**
- 1500+ annual **IEEE conferences** + 43 **VDE conferences**
- More than **2800 IEEE standards** (active, archived, redlines) + **IEEE Standard Dictionary**
- 20 **IET conferences**, 26 **IET journals & magazines**
- **Bell Labs Technical Journal (BLTJ)** back to 1922
- Backfile to 1988, select legacy data back to 1872
- Inspec index records for all articles

# IEEE and Patents

# IEEE Leads US Patent Citations

## Top 20 Publishers Referenced Most Frequently by Top 40 Patenting Organizations

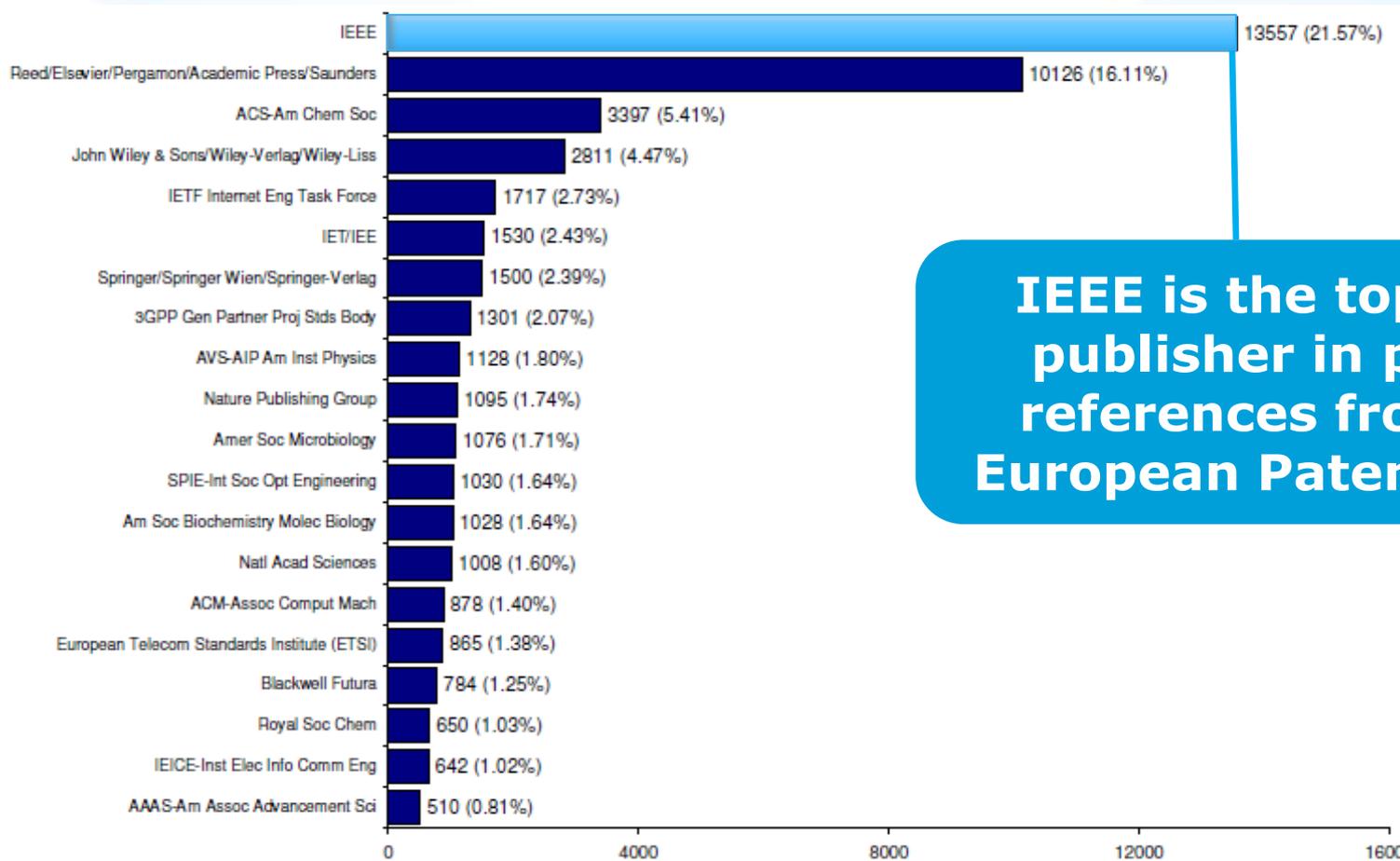


Source: 1790 Analytics LLC 2015. Based on number of references to papers/standards/conferences from 1997-2014



# IEEE Leads European Patent Citations

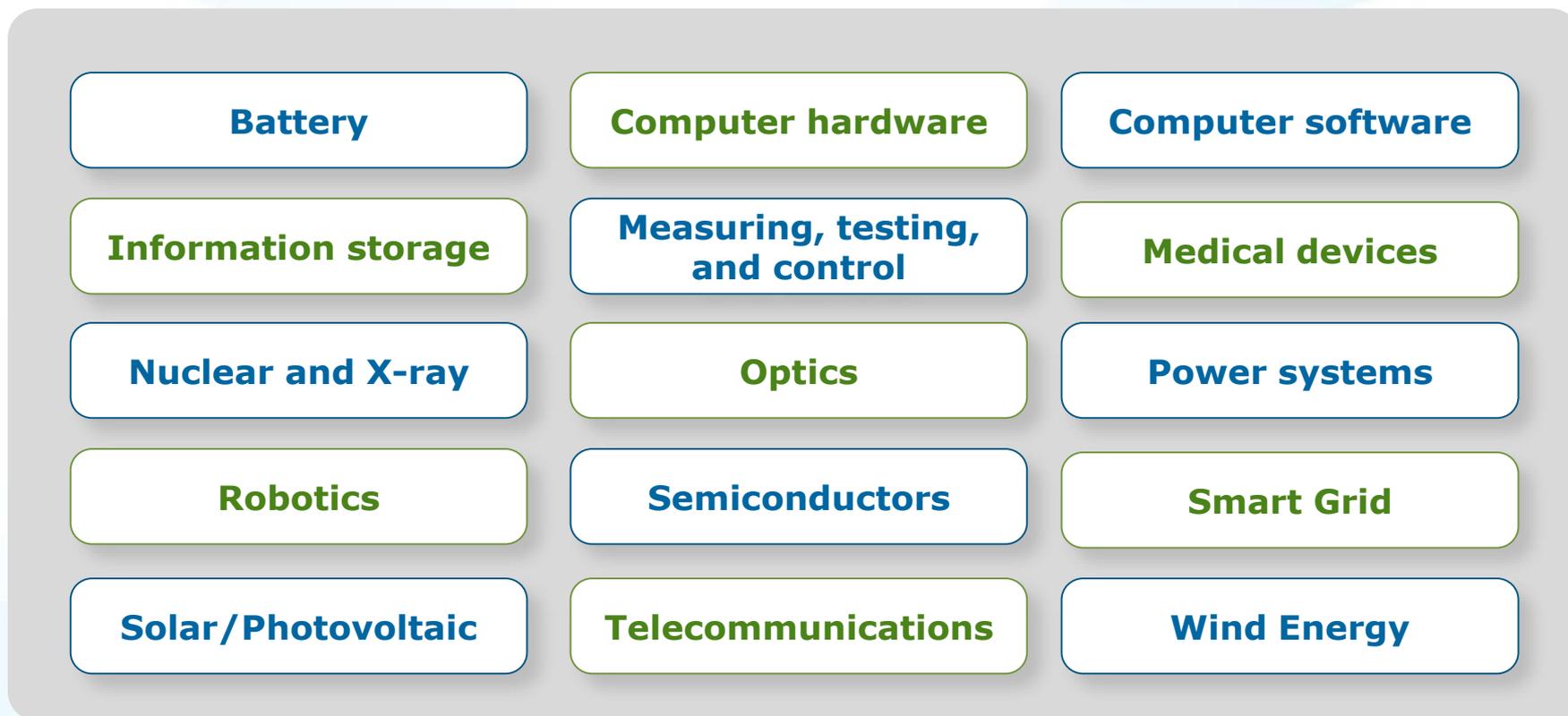
## Top 20 Publishers Referenced Most Frequently by Top 25 Patenting Organizations



**IEEE is the top cited publisher in patent references from the European Patent Office**

Source: 1790 Analytics LLC 2012, , Science References from 1997-2011

# Technology areas where patents cite IEEE most



Source: 1790 Analytics LLC 2015

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# Content on IEEE Xplore Digital Library

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# Full text content from all 39 IEEE Societies

**IEEE Aerospace and Electronic Systems Society**

**IEEE Antennas and Propagation Society**

**IEEE Broadcast Technology Society**

**IEEE Circuits and Systems Society**

**IEEE Communications Society**

**IEEE Components, Packaging, and Manufacturing Technology Society**

**IEEE Computational Intelligence Society**

**IEEE Computer Society**

**IEEE Consumer Electronics Society**

**IEEE Control Systems Society**

**IEEE Dielectrics and Electrical Insulation Society**

**IEEE Education Society**

**IEEE Electron Devices Society**

**IEEE Electromagnetic Compatibility Society**

**IEEE Engineering in Medicine and Biology Society**

**IEEE Geoscience and Remote Sensing Society**

**IEEE Industrial Electronics Society**

**IEEE Industry Applications Society**

**IEEE Information Theory Society**

**IEEE Instrumentation and Measurement Society**

**IEEE Intelligent Transportation Systems Society**

**IEEE Magnetics Society**

**IEEE Microwave Theory and Techniques Society**

**IEEE Nuclear and Plasma Sciences Society**

**IEEE Oceanic Engineering Society**

**IEEE Photonics Society**

**IEEE Power Electronics Society**

**IEEE Power & Energy Society**

**IEEE Product Safety Engineering Society**

**IEEE Professional Communications Society**

**IEEE Reliability Society**

**IEEE Robotics and Automation Society**

**IEEE Signal Processing Society**

**IEEE Society on Social Implications of Technology**

**IEEE Solid-State Circuits Society**

**IEEE Systems, Man, and Cybernetics Society**

**IEEE Technology and Engineering Management Society NEW in 2015**

**IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society**

**IEEE Vehicular Technology Society**

# IEEE covers all areas of technology

More than just electrical engineering & computer science

MACHINE LEARNING **BIG DATA**

**OPTICS** RENEWABLE ENERGY

SEMICONDUCTORS **SMART GRID**

**IMAGING** NANOTECHNOLOGY

SIGNAL PROCESSING **AEROSPACE**

**COMMUNICATIONS** HUMAN-CENTERED INFORMATICS

BIOMEDICAL ENGINEERING **ELECTRONICS**

**NEXT GEN WIRELESS** CIRCUITS

**CLOUD COMPUTING**

**CYBER SECURITY** ELECTROMAGNETICS  **IEEE**

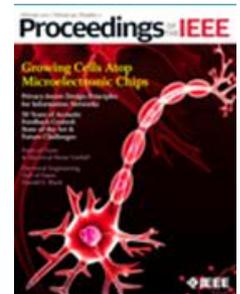
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# Multidisciplinary Content on IEEE Xplore Digital Library

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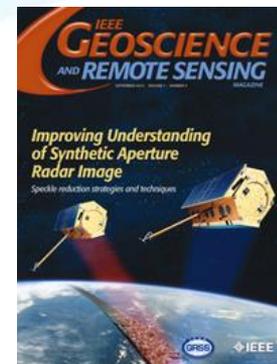
# Life Sciences

- At least **eight IEEE publications** are dedicated in whole or in part to technology related to Life Sciences.
- Plus, there are more than 90 annual conferences, 20 periodicals and 20 IEEE standards that cover **medical device communications**.
- In IEEE *Xplore*, you'll also find coverage of therapeutic devices used in rehabilitation processes, such as physical therapy and devices used to restore movement and function.
- Examples of IEEE publications:
  - IEEE Pulse
  - IEEE Trans. on Biomedical Engineering
  - IEEE Reviews on Biomedical Engineering
  - IEEE Trans. on Neural Systems and Rehabilitation Engineering
  - IEEE Trans. on Information Technology in Biomedicine
  - IEEE Trans. on Medical Imaging
  - IEEE/ACM Trans. on Computational Biology and Bioinformatics
  - IEEE Trans. on Biomedical Circuits and Systems
  - IEEE Trans. on NanoBioscience
  - IEEE Trans. on Autonomous Mental Development.



# Geoscience and related fields

- IEEE's geoscience and remote sensing publications cover the fusion of engineering and **geoscientific fields including geophysics, geology, hydrology, meteorology, etc.**
- In IEEE *Xplore*, you'll also find information relevant to **natural resources engineering and mineral resources engineering**, including extensive coverage of technologies related to **oil and gas exploration, drilling operations, offshore oil rigs and mining.**
- Examples of IEEE publications:
  - **IEEE Trans. on Geoscience & Remote Sensing**
  - **IEEE Geoscience & Remote Sensing Magazine**
  - **IEEE Geoscience & Remote Sensing Letters**
  - **IEEE International Symposium Geoscience and Remote Sensing (IGARSS)**
  - **IEEE Petroleum and Chemical Industry Technical Conference (PCIC)**



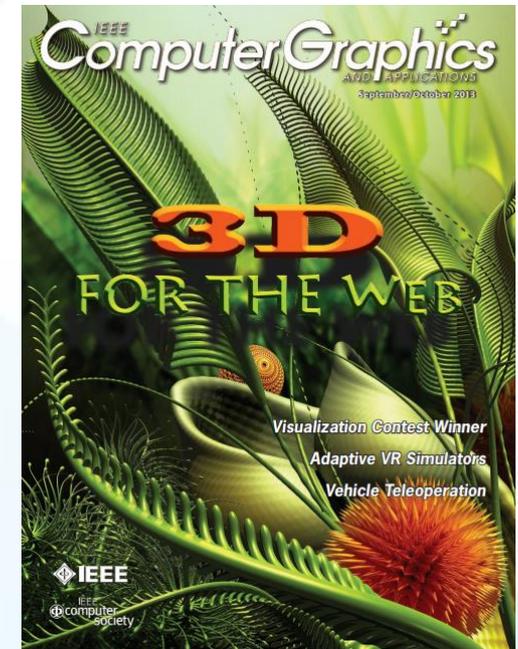
# Manufacturing Engineering

- IEEE's publications cover manufacturing practices and technologies, including **the development of systems, processes, machines, and tools.**
- In IEEE *Xplore*, you'll find information on **virtual manufacturing, computer integrated manufacturing, agile manufacturing, quality control, robotics and automation, mechatronics,** and much more
- Relevant IEEE publications include:
  - IEEE/ASME Transactions on Mechatronics (#1 most cited journal in Engineering - Manufacturing)
  - IEEE Transactions on Components, Packaging and Manufacturing Technology
  - IEEE Transactions on Semiconductor Manufacturing
  - IEEE Transactions on Automation Science and Engineering
  - IEEE Robotics & Automation Magazine
  - IEEE International Symposium on Assembly and Manufacturing
  - International Conference on Digital Manufacturing and Automation
  - e-Manufacturing & Design Collaboration Symposium Electronics Manufacturing Technology Symposium
  - International Conference on System Science, Engineering Design and Manufacturing Informatization



# Digital Art & Technology

- IEEE *Xplore* covers the leading edge of **computer graphics technology and its applications** in everything from business to the arts.
- Topics include **computer graphics, design, animation, 3D, user interface, motion graphics**, and more
- Examples of IEEE *Xplore* publications:
  - IEEE Computer Graphics
  - IEEE Trans. On Visualization & Computer Graphics
  - International Conference on Computer-Aided Design & Computer Graphics
  - International Conference on Computer Graphics, Imaging & Visualization
  - International Conference on Image & Graphics



# Game Design

- IEEE *Xplore* covers the design of **video games, mathematical games, human-computer interactions in games, and games involving physical objects.**
- Topics include **game production, computational intelligence, artificial intelligence, simulations,** and more
- Examples of IEEE *Xplore* publications:
  - IEEE Trans. On Computational Intelligence and AI in Games
  - Symposium on Computational Intelligence in Games
  - International Conference on Computer Games
  - International Workshop on Digital Game and Intelligent Toy Enhanced Learning
  - International Symposium on Haptic, Audio, Visual Environments and Games

Computational Intelligence in Games 2014  
August 26 – 29, Park Inn Hotel, Dortmund, Germany

www.cig2014.de April 1, 2014 IEEE Explore

Mark Rieffl  
Georgia Institute of Technology

Jochen Peckert  
Blue Nile GmbH

Rilla Khaled  
University of Malta

Thorsten Quandt  
Witten Institute, Witten, Germany

Computational & artificial intelligence in:  
• Video games  
• Board and card games  
• Economic or mathematical games  
• Serious games  
• Augmented and mixed-reality games  
• Games for mobile platforms

Calls for Special Sessions (March 1) and Tutorials (April 1) OPEN!

Learning in games  
• Procedural content generation  
• Player/opponent modeling in games  
• Player affective modeling  
• Player satisfaction and experience in games  
• Computational and artificial intelligence based game design  
• Intelligent interactive narrative  
• Theoretical or experimental analysis of AI techniques for games  
• Non-player characters in games  
• Comparative studies and game-based benchmarking  
• Applications of game theory

ERCIS

General Chairs: Günter Rüdolph, TU Dortmund, Germany  
Mike Preuss, WWU Münster, Germany  
Program Chairs: Muzam Eladhari, University of Malta  
Moshe Sipper, Ben-Gurion University of the Negev, Israel  
Tutorials/Special Sessions Chair: Philip Hingston, Edith Cowan University, Perth, Australia  
Competition Chair: Simon Lucas, University of Essex, UK  
Keynote Chair: Gillian Smith, Northeastern University, Boston, USA  
Proceedings Chair: Paolo Burelli, Aalborg University, Copenhagen, Denmark

IEEE IEEE Computational Intelligence Society

# With IEEE *Xplore*, learn how technology impacts fields such as...

**Healthcare:** telemedicine, electronic medical records, patient-specific healthcare, cloud computing in the medical field, patient monitoring systems, informatics, and more

## Emerging Technologies for Patient-Specific Healthcare

### I. INTRODUCTION

**P**ATIENT-SPECIFIC healthcare is a research field that has recently garnered much more attention due to the benefits of better services provided to patients and a reduction of healthcare costs. A series of emerging technologies [1] aim to emphasize the provision of personalized healthcare services to patients [2]–[5]. These include the following.

- 1) Pattern recognition methods for signal pattern classification toward the prediction and diagnosis of diseases.
- 2) Body sensor networks.
- 3) Algorithms for the analysis of patient-specific physiological signals.
- 4) Ontologies and context-based electronic health records (EHRs).
- 5) Methodologies for the integration of clinical journals and

intranuclear spike activity recorded from Parkinson's disease patients.

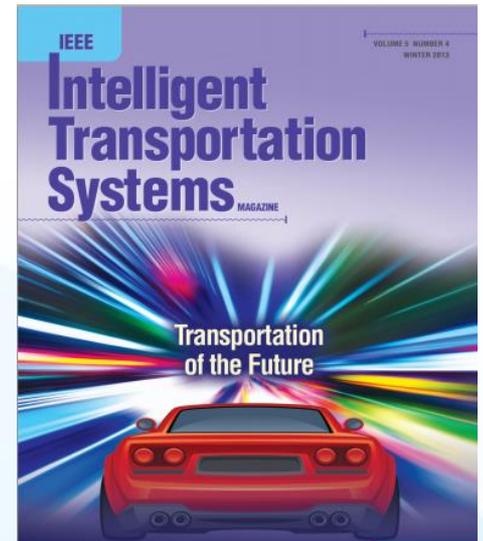
A new Neural Sensing Healthcare System for 3D Vision Technology, NeuroGlasses, is presented in [7]. NeuroGlasses is a noninvasive, wearable physiological signal monitoring system to facilitate health analysis and diagnosis of 3-D video watchers. The NeuroGlasses system acquires health-related signals by physiological sensors and provides feedback of health-related features. The system employs signal-specific reconstruction and features extraction to compensate the distortion of signals caused by the variation of sensor placement. Through an on-campus pilot study, the experimental results show that NeuroGlasses system can effectively provide physiological information.

In [8], the authors explore how the rhythmogram can be used

# With IEEE *Xplore*, learn how technology impacts fields such as...

**Transportation:** intelligent transportation systems, logistics, supply chain management, and more

- Related IEEE Journals & Conferences:
  - IEEE Trans. on Intelligent Transportation Systems
  - IEEE Intelligent Transportation Systems Magazine
  - IEEE Trans. on Automation Science and Engineering
  - IEEE International Conference on Automation and Logistics



# With IEEE Xplore, learn how technology impacts fields such as...

**Business & Finance:** information systems, project management, risk management, business informatics, R&D project selection and evaluation, IT investment justification, innovation, and more

Read articles by leaders in the field:



**Prof. Clayton Christensen**  
*Harvard Business School*

“Innovator’s Dilemma”

<http://www.claytonchristensen.com/>

## Optimal Detection of Sparse Mixtures against a Given Null Distribution

T. Tony Cai and Yihong Wu, Member, IEEE.

**Abstract**—Detection of sparse signals arises in a wide range of modern scientific studies. The focus so far has been mainly on Gaussian mixture models. In this paper, we consider the detection problem under a general sparse mixture model and obtain explicit expressions for the detection boundary under mild regularity conditions. Moreover, for Gaussian null hypothesis, we establish the adaptive optimality of the higher criticism procedure for all sparse mixtures satisfying the same conditions. In particular, the general results obtained in this paper recover and extend in a unified manner the previously known results on sparse detection far beyond the conventional Gaussian model and other exponential families.

**Index Terms**—Hypothesis testing, high-dimensional statistics, sparse mixture, higher criticism, adaptive tests, total variation, Hellinger distance.

### I. INTRODUCTION

Detection of sparse mixtures is an important problem that

according to Ray( $\alpha_i$ ), representing the random voltages observed on the  $n$  channels. In the absence of noise,  $\alpha_i$ 's are all equal to one, the nominal value; while in the presence of signal, exactly one of the  $\alpha_i$ 's becomes a known value  $\alpha > 1$ . Denoting the uniform distribution on  $[n]$  by  $U_n$ , the goal is to test the following competing hypotheses:

$$H_0^{(\alpha)} : \alpha_i = 1, i \in [n], \quad (1)$$

$$\text{v.s. } H_1^{(\alpha)} : \alpha_i = 1 + (\alpha - 1)1_{\{i=J\}}, J \sim U_n.$$

Since the signal only appears once out of the  $n$  samples, in order for the signal to be distinguishable from noise, it is necessary for the amplitude  $\alpha$  to grow with the sample size  $n$  (in fact, at least logarithmically). By proving that the log-likelihood ratio converges to a stable distribution in the large- $n$  limit, Dobrushin [1] obtained sharp asymptotics of the smallest  $\alpha$  in order to achieve the desired false alarm and miss detection

**Prof. Tony Cai**  
*The Wharton School of the University of Pennsylvania*

# With IEEE *Xplore*, learn how technology impacts fields such as...

**Criminal Justice:** crime scene investigation technologies, cybercrime, crime statistics, and more

## Dimensional Analysis of a Crime Scene from a Single Image

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## Crime Forecasting Using Data Mining Techniques

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11-11 Dec. 2011

## Cybercrime regulation at a cross-road: State and transnational laws versus global laws

The proliferation of cybercrime necessitates all internet-connected states to be involved in cybercrime regulation. Although it has been stated that the internet per se and cyberspace in general are by its very nature ungovernable, many states have taken territorial control of the internet although the effectiveness of such control in cross-border crime commission may be questioned. The internet may very well become ungovernable if a nation-state takes a unilateral decision on which conduct constitutes permissible online conduct or endeavours to superimpose laws on other nation-states. It is therefore suggested that under the auspices of the United Nations and within an international law context the following issues should be addressed: conceptualizing the term "cybercrime" in establishing for example whether it includes a cyber-attack, determining which online conduct is permissible to ensure peace and security and initiating negotiations towards a Cybercrime Treaty.

This paper appears in: [Information Society \(i-Society\)](#), 2012 International Conference on, Issue Date: 25-28 June 2012, Written by: Watney, Murdoch

# With IEEE *Xplore*, learn how technology impacts fields such as...

**Liberal Arts:** digital humanities, use of image processing in art conservation, music classification, and more

2012 6th IEEE International Conference on Digital Ecosystems and Technologies (DEST)

## TRACK E: DIGITAL HUMANITIES

### Track co-Chairs

- **Tobias Blanke**, *Kings College, UK*
- **Stuart Dunn**, *King's College London, UK*

The digital humanities form a bridge between the traditional practices of scholarship and the opportunities afforded by advances in technology, enabling researchers to reconsider old problems in new ways, and providing the methods, tools and frameworks to support them in developing new modes of enquiry. On the one hand, the humanities are faced with ever greater volumes of complex data and digital resources, for example from the increasing mass digitisation of historical records.

On the other hand, research in the humanities is moving away from the model of individual scholars to one in which international and inter-disciplinary teams of researchers collaborate actively within a diverse ecosystem of digital resources, tools, and services, not forgetting of course the users themselves – the rapid evolution of Web technologies continues to privilege the human as a key agent, both as provider and consumer of content, and this in turn is investing humanities scholarship

increasing awareness of new audiences

# With IEEE *Xplore*, learn how technology impacts fields such as...

**Entertainment:** computer graphics, animation, 3D, digital motion pictures, laser projectors, and more

## Bringing Physical Characters to Life

Akhil J. Madhani  
Walt Disney Imagineering R&D

### Ray Tracing for the Movie 'Cars'

Per H. Christensen\*    Julian Fong    David M. Laur    Dana Batali

Pixar Animation Studios



#### Abstract

At Disney, we are s  
to present these ch  
entertainment robot  
Disney in attraction

In this talk, I hope  
Disney. In particul  
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As examples of cha  
I discuss two newer  
the Disney theme  
developed in conjur  
and has made app

#### ABSTRACT

This paper describes how we extended Pixar's RenderMan renderer with ray tracing abilities. In order to ray trace highly complex scenes we use multiresolution geometry and texture caches, and use ray differentials to determine the appropriate resolution. With this method we are able to efficiently ray trace scenes with much more geometry and texture data than there is main memory. Movie-quality rendering of scenes of such complexity had only previously been possible with pure scanline rendering algorithms. Adding ray

texture cache keeps recently accessed texture tiles ready for fast access. This combination of ray differentials and caching makes ray tracing of very complex scenes feasible.

This paper first gives a more detailed motivation for the use of ray tracing in 'Cars', and lists the harsh rendering requirements in the movie industry. It then gives an overview of how the REYES algorithm deals with complex scenes and goes on to explain our work on efficient ray tracing of equally complex scenes. An explanation of our hybrid rendering approach, combining REYES with ray tracing, follows. Finally, we measure the efficiency of our method on a



# With IEEE *Xplore*, learn how technology impacts fields such as...

**Apparel Design:** e-textiles, smart fabrics, intelligent clothing, wearable computing, and more



## Wearable Computing

Editor: Bernt Schiele ■ MPI Informatics ■ [schiele@mpi-inf.mpg.de](mailto:schiele@mpi-inf.mpg.de)

### Smart Textiles: From Niche to Mainstream

*Jingyuan Cheng, Paul Lukowicz, Niels Henze, Albrecht Schmidt,  
Oliver Amft, Giovanni A. Salvatore, and Gerhard Tröster*

**A**s with many new technologies, smart clothing and textile electronics currently suffer from the chicken-and-egg problem—that is, for the devices to be widely deployed, the price must come down, but for the price to come down, the devices must be mass-produced (and widely deployed).

between the various people creating the fabric, garments, electronics platforms, and apps (see Figure 1).

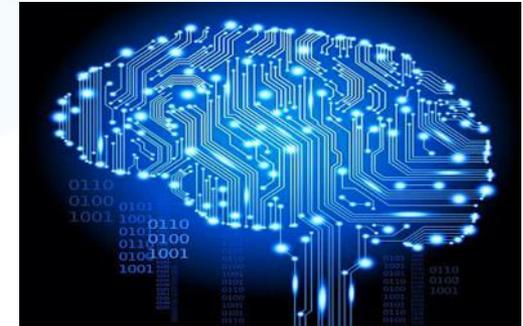
The solution to the chicken-and-egg problem must incorporate all steps—from garment production through to wearable sensing apps. With appropriate abstraction, the solution in

process should essentially remain a series of cutting and sewing steps, possibly including the integration of different materials. Designers could apply this process to the sensing layer, as well, to align the sensors with the garment and with targeted application domains. However, three requireme

# New IEEE Journals Planned for 2017

In 2017, IEEE will introduce six new journals that will be available for subscription:

- *IEEE **Communications Standards Magazine***
- *IEEE Journal of **Electromagnetics, RF and Microwaves in Medicine and Biology***
- *IEEE Transactions on **Emerging Topics in Computational Intelligence***
- *IEEE Transactions on **Green Communications and Networking***
- *IEEE Transactions on **Radiation and Plasma Medical Sciences***
- *IEEE Journal of **Radio Frequency Identification***



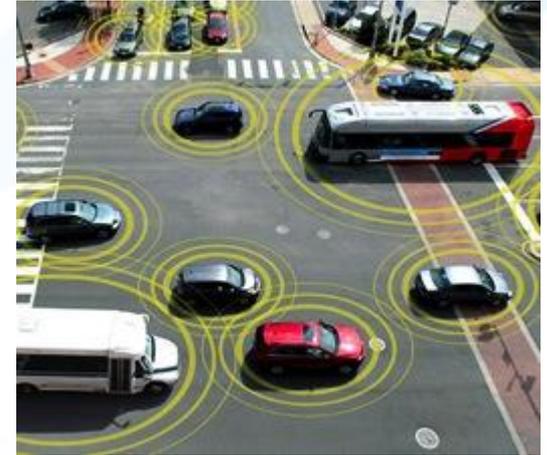
– All Included in an IEL Subscription

For a complete title listing, to go: <http://ieeexplore.ieee.org/xpl/opacjrn.jsp>

# New IEEE Journals Coming in 2016

In 2016, IEEE will introduce four new journals that will be available for subscription:

- *IEEE Transactions on **Intelligent Vehicles***
- *IEEE Journal on **Multiscale and Multiphysics Computational Techniques***
- *IEEE **Robotics and Automation Letters***
- *IEEE Transactions on **Sustainable Computing***



All included in an IEL subscription

For a complete title listing, to go: <http://ieeexplore.ieee.org/xpl/opacjrn.jsp>

# New IEEE Journals from 2015

- *IEEE Trans. on **Big Data***
- *IEEE Trans. on **Transportation Electrification***
- *IEEE Trans. on **Cognitive Communications and Networking***
- *IEEE Trans. on **Computational Imaging***
- *IEEE Trans. on **Molecular, Biological, and Multi-Scale Communications***
- *IEEE Trans. on **Multi-Scale Computing Systems***
- *IEEE Trans. on **Signal and Information Processing over Networks***
- *IEEE **Systems, Man, and Cybernetics** Magazine*

All included in an IEL subscription

For a complete title listing, to go: <http://ieeexplore.ieee.org/xpl/opacjrn.jsp>



# A sampling of some of the new conferences added in 2015

- **Big Data Software Engineering** (BIGDSE), 2015 IEEE/ACM 1st International Workshop on
- **Computational Electromagnetics** (ICCEM), 2015 IEEE International Conference on
- **DC Microgrids** (ICDCM), 2015 IEEE First International Conference on
- **Electromagnetic Compatibility and Signal Integrity**, 2015 IEEE Symposium on
- **Identity, Security and Behavior Analysis (ISBA)**, 2015 IEEE International Conference on
- **Industrial Engineering and Operations Management** (IEOM), 2015 International Conference on
- **Microwaves for Intelligent Mobility** (ICMIM), 2015 IEEE MTT-S International Conference on
- **Multimedia Big Data** (BigMM), 2015 IEEE International Conference on
- **Networking Systems and Security** (NSysS), 2015 International Conference on
- **Sampling Theory and Applications** (SampTA), 2015 International Conference on
- **Signal Processing, Informatics, Communication and Energy Systems** (SPICES), 2015 IEEE International Conference on
- **Smart Cities Conference** (ISC2), 2015 IEEE First International

# Examples of New IEEE Conferences in 2014



- **Internet of Things** (WF-IoT), 2014 IEEE World Forum on
- **Humanitarian Technology** Conference, (IHTC), 2014 IEEE Canada International
- **Aerospace Electronics and Remote Sensing Technology** (ICARES), 2014 IEEE International Conference on
- **Antenna Measurements & Applications** (CAMA), 2014 IEEE Conference on
- **Consumer Electronics**, Taiwan (ICCE-TW), 2014 IEEE International Conference on
- **Energy Conversion** (CENCON), 2014 IEEE Conference on
- **Ethics in Science**, Technology and Engineering, 2014 IEEE International Symposium on
- **Transportation Electrification** Asia-Pacific (ITEC Asia-Pacific), 2014 IEEE Conference and Expo
- **Intelligent Energy** and Power Systems (IEPS), 2014 IEEE International Conference on
- **Quantum Optics Workshop** (QOW), 2014
- **Sensor Systems for a Changing Ocean** (SSCO), 2014 IEEE
- **Wireless and Mobile**, 2014 IEEE Asia Pacific Conference on
- **Industrial Engineering and Information Technology** (IEIT), 2014 International Conference on
- **Guidance, Navigation and Control Conference** (CGNCC), 2014 IEEE Chinese

# A sampling of some of the new conferences added in 2016

- **Cloud Computing and Big Data Analysis** (ICCCBDA), 2016 IEEE International Conference on
- **Computer Communication and the Internet** (ICCCI), 2016 First IEEE International Conference on
- **Connected Health: Applications, Systems and Engineering Technologies** (CHASE), 2016 IEEE First International Conference on
- **Control, Measurement and Instrumentation** (CMI), 2016 IEEE First International Conference on
- **Electrical Systems for Aircraft, Railway, Ship Propulsion and Road Vehicles & International Transportation Electrification** Conference (ESARS-ITEC), 2016 International Conference on
- **Intelligent Systems Engineering** (ICISE), 2016 International Conference on
- **Intelligent Transportation Engineering** (ICITE), 2016 IEEE International Conference on
- **Mechatronics, Adaptive and Intelligent Systems (MAIS)**, 2016 IEEE Conference on
- **Power Electronics, Intelligent Control and Energy Systems** (ICPEICES), 2016 IEEE 1st International Conference on
- **The Science of Electrical Engineering** (ICSEE), 2016 IEEE International Conference on

# Popular IEEE Standards

**IEEE 802 Series**—IEEE Standard for Ethernet

**IEEE 3000 Standards Collection™**—Formerly the IEEE Color Books®, this collection will reorganize the 13 Color Books into approximately 70 “dot” standards covering specific technical topics on all facets of industrial and commercial power systems.

**IEEE 81-2012™**—IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System

**2017 National Electrical Safety Code® (NESC®)**—Sets the ground rules for practical safeguarding of persons during the installation, operation, or maintenance of electric supply and communications lines and associated equipment.

**IEEE 43™**—IEEE Recommended Practice for Testing Insulation Resistance of Electric Machinery

**IEEE 80™**—IEEE Guide for Safety in AC Substation Grounding

**IEEE 81™**—IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System

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# Setting up Rooming Mobile Access

---

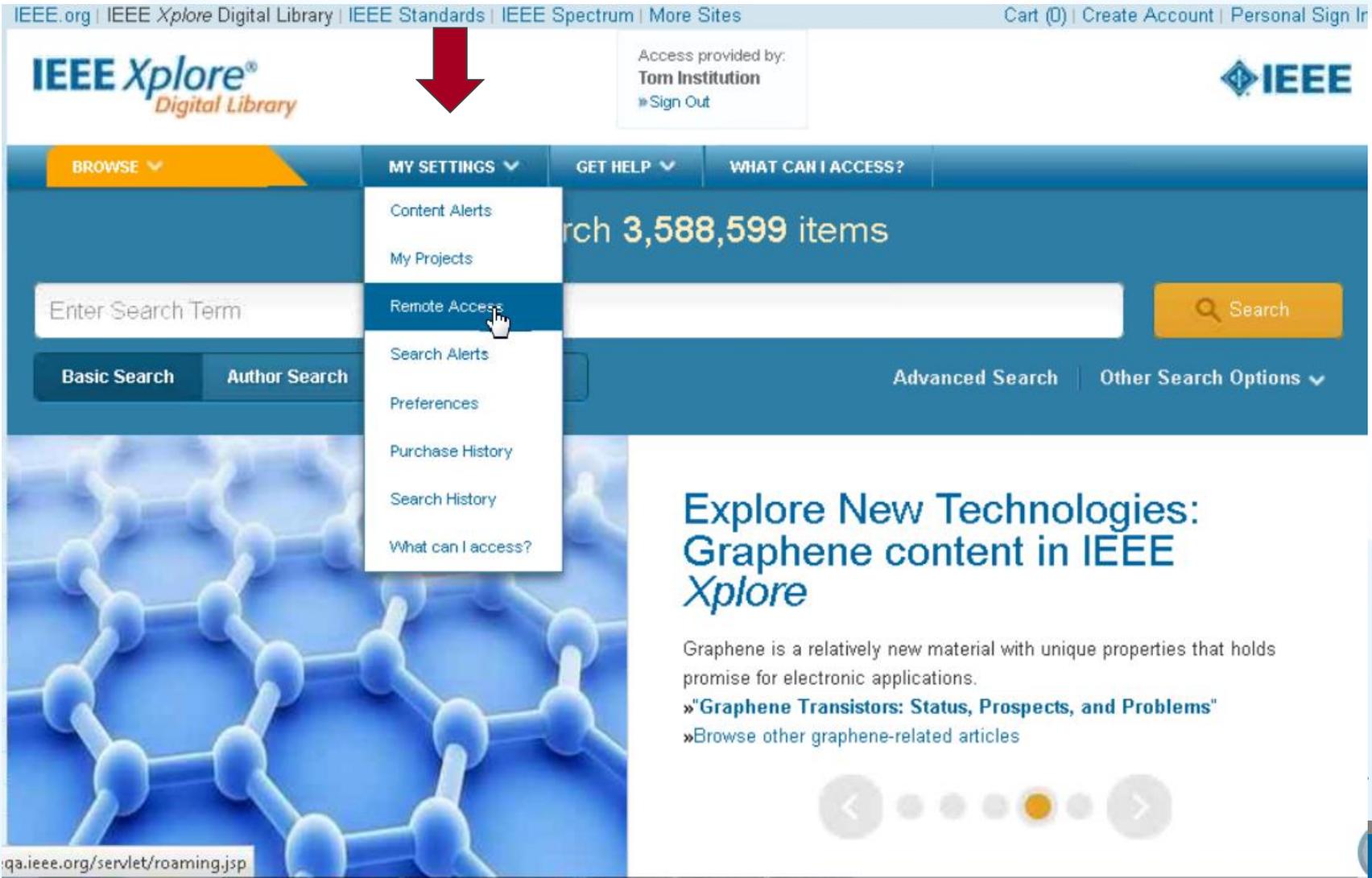
Off-campus/Remote Access for laptop, tablet,  
phone

# Roaming Mobile Access

- Allows for access to IEEE *Xplore* content when users are off-campus
- Can be set-up for multiple devices – laptop, tablet, phone
- Available for 90 days
- To initiate:
  - Login to IEEE *Xplore* from within your institution's IP range
  - Sign In with a personal IEEE Account
  - Select My Settings > Remote Access

Libraries can have this feature enabled by contacting Online Support ([onlinesupport@ieee.org](mailto:onlinesupport@ieee.org)) **IT IS ENABLED for Cons. MEMBERS in RUSSIA**

# Roaming Mobile Access - How Roaming Access setup appears on IEEE Xplore:



IEEE.org | IEEE Xplore Digital Library | IEEE Standards | IEEE Spectrum | More Sites Cart (0) | Create Account | Personal Sign In

IEEE Xplore® Digital Library Access provided by: Tom Institution Sign Out IEEE

**BROWSE** **MY SETTINGS** GET HELP WHAT CAN I ACCESS?

Search 3,588,599 items

Enter Search Term

Basic Search Author Search Advanced Search | Other Search Options

- Content Alerts
- My Projects
- Remote Access**
- Search Alerts
- Preferences
- Purchase History
- Search History
- What can I access?

## Explore New Technologies: Graphene content in IEEE Xplore

Graphene is a relatively new material with unique properties that holds promise for electronic applications.

- » "Graphene Transistors: Status, Prospects, and Problems"
- » Browse other graphene-related articles

IEEE

qa.ieee.org/servlet/roaming.jsp

# Roaming Mobile Access - User prompted to create/sign in with personal IEEE account:

The screenshot displays the IEEE Xplore Digital Library website. At the top, navigation links include IEEE.org, IEEE Xplore Digital Library, IEEE Standards, IEEE Spectrum, and More Sites. On the right, there are links for Cart (0), Create Account, and Personal Sign In. The main header features the IEEE Xplore Digital Library logo on the left, a user access box in the center stating "Access provided by: Tom Institution" with a "Sign Out" link, and the IEEE logo on the right. Below the header is a blue navigation bar with buttons for BROWSE, MY SETTINGS, GET HELP, and WHAT CAN I ACCESS?. A search bar is positioned below the navigation bar, containing the text "Enter Search Term" and a "Search" button. Underneath the search bar are buttons for Basic Search, Author Search, and Publication Search, along with links for Advanced Search and Other Search Options. The main content area is titled "Remote Access" and contains a yellow box with the text "Institutional Authentication" and "Personal Sign In is required to establish roaming access. Personal Sign In". At the bottom of this section is a button labeled "ESTABLISH REMOTE ACCESS".

IEEE.org | IEEE Xplore Digital Library | IEEE Standards | IEEE Spectrum | More Sites

Cart (0) | Create Account | Personal Sign In

IEEE Xplore<sup>®</sup>  
Digital Library

Access provided by:  
Tom Institution  
» Sign Out

IEEE

BROWSE ▾ MY SETTINGS ▾ GET HELP ▾ WHAT CAN I ACCESS?

Enter Search Term

Search

Basic Search Author Search Publication Search

Advanced Search Other Search Options ▾

## Remote Access

**Institutional Authentication**  
Personal Sign In is required to establish roaming access. Personal Sign In

ESTABLISH REMOTE ACCESS

# Roaming Mobile Access – Select Establish Remote Access to pair mobile device:

IEEE Xplore®  
Digital Library

Access provided by:  
Tom Institution  
» Sign Out



BROWSE ▾

MY SETTINGS ▾

GET HELP ▾

WHAT CAN I ACCESS?

Enter Search Term

Search

Basic Search

Author Search

Publication Search

Advanced Search

Other Search Options

## Remote Access

IEEE has registered your device and mapped to your ID, you now have roaming access for the next 90 days. "you can now use your device off campus"

### Institutional Authentication

You must be authenticated within your institution's IP range to establish remote access. This feature allows you to access full-text on a mobile device for up to 90 days. Note: To connect remotely, you must use the same device and browser used to establish access.

ESTABLISH REMOTE ACCESS

# Roaming Mobile Access – Every 90 days refresh remote access:

IEEE.org | IEEE Xplore Digital Library | IEEE Standards | IEEE Spectrum | More Sites

Welcome Tbruno@atypon.com | Cart (0)

IEEE Xplore®  
Digital Library

Access provided by:  
Tom Institution  
Sign Out

IEEE

BROWSE ▾ MY SETTINGS ▾ GET HELP ▾ WHAT CAN I ACCESS?

Enter Search Term

Search

Basic Search Author Search Publication Search

Advanced Search Other Search Options ▾

## Remote Access

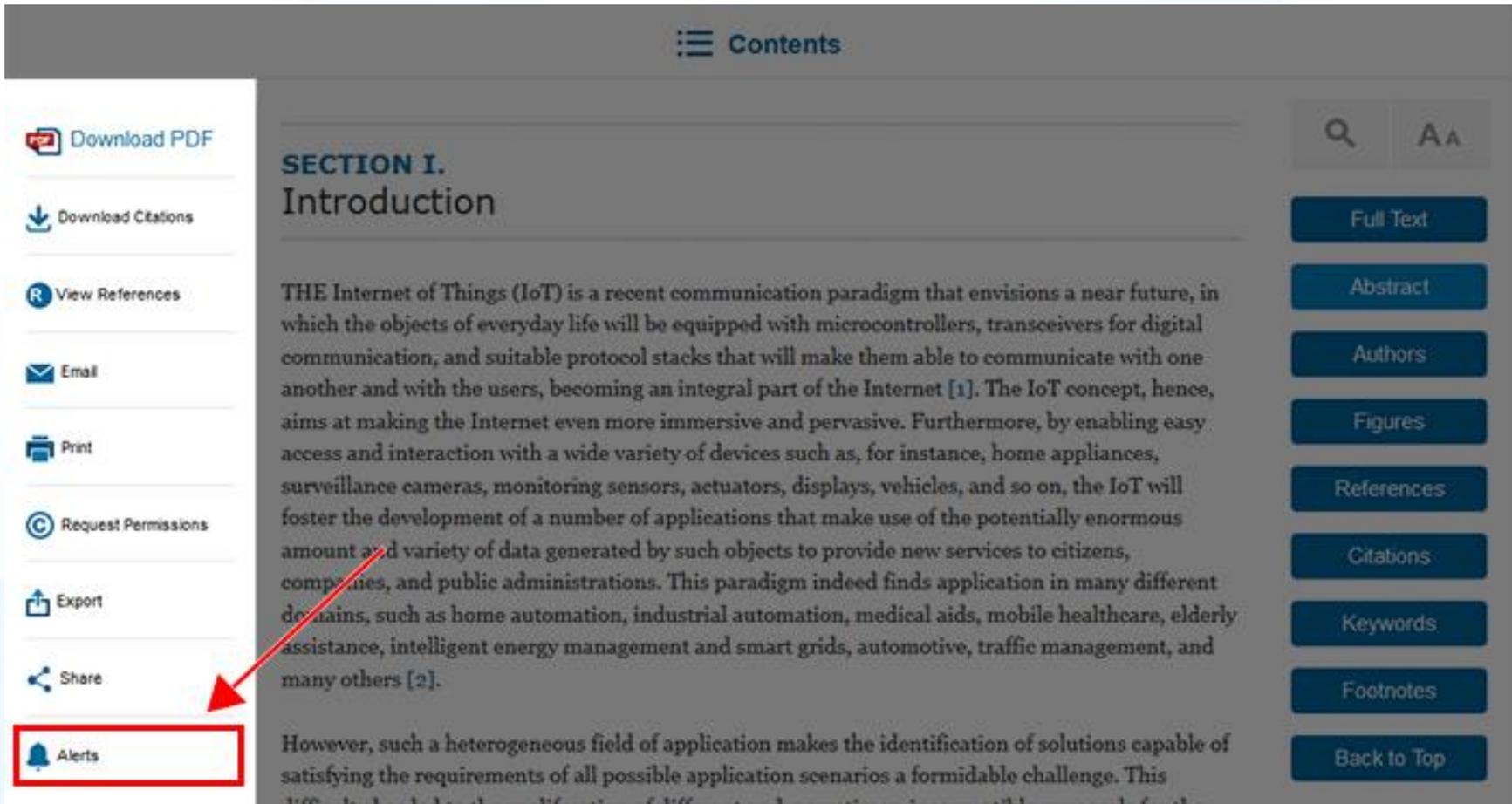
### Your Remote Status is Active - Expires on May 04, 2015

You must be authenticated within your Institution's IP range to refresh remote access. This feature allows you to access full-text on a mobile device for up to 90 days. Note: To connect remotely, you must use the same device and browser used to refresh access.

REFRESH REMOTE ACCESS

# Citation alert

to receive an alert when the document is cited



The screenshot shows a document page with a sidebar menu on the left and a navigation panel on the right. The sidebar menu includes options like 'Download PDF', 'Download Citations', 'View References', 'Email', 'Print', 'Request Permissions', 'Export', 'Share', and 'Alerts'. The 'Alerts' option is highlighted with a red box and a red arrow. The main content area is titled 'SECTION I. Introduction' and contains text about the Internet of Things (IoT). The navigation panel on the right includes buttons for 'Full Text', 'Abstract', 'Authors', 'Figures', 'References', 'Citations', 'Keywords', 'Footnotes', and 'Back to Top'. The 'Citations' button is highlighted with a red box.

Contents

Download PDF

Download Citations

View References

Email

Print

Request Permissions

Export

Share

Alerts

SECTION I.  
Introduction

THE Internet of Things (IoT) is a recent communication paradigm that envisions a near future, in which the objects of everyday life will be equipped with microcontrollers, transceivers for digital communication, and suitable protocol stacks that will make them able to communicate with one another and with the users, becoming an integral part of the Internet [1]. The IoT concept, hence, aims at making the Internet even more immersive and pervasive. Furthermore, by enabling easy access and interaction with a wide variety of devices such as, for instance, home appliances, surveillance cameras, monitoring sensors, actuators, displays, vehicles, and so on, the IoT will foster the development of a number of applications that make use of the potentially enormous amount and variety of data generated by such objects to provide new services to citizens, companies, and public administrations. This paradigm indeed finds application in many different domains, such as home automation, industrial automation, medical aids, mobile healthcare, elderly assistance, intelligent energy management and smart grids, automotive, traffic management, and many others [2].

However, such a heterogeneous field of application makes the identification of solutions capable of satisfying the requirements of all possible application scenarios a formidable challenge. This difficulty has led to the realization of different and, sometimes, incompatible proposals for the

Full Text

Abstract

Authors

Figures

References

Citations

Keywords

Footnotes

Back to Top

# Algorithms in IEEE Xplore

Abstract Authors Figures References Citations Keywords Metrics **Algorithms**



This article contains an algorithm made available via IEEE's partnership with Code Ocean, a cloud service that allows users to view, run, modify, and download algorithms in IEEE Xplore articles. Click the algorithm name below to access it on the Code Ocean website.

Name: [Multi-Scale Patch-Based Image Restoration - Super Resolution](#)

Programming Language: 

You must register for a free account to start using Code Ocean

The screenshot displays the Code Ocean web interface. At the top, there are navigation tabs: Dashboard, Explore, and Learn. The main header shows the article title "Multi-Scale Patch-Based Image ..." and tabs for Details, Code, and Interface. The "Code" tab is active, showing a MATLAB script named "demo\_sr.m".

```
1 clear;
2 clc;
3 pkg load image
4 % make sure you are in the MultiScaleEPLL dire
5 addpath(genpath(pwd));
6
7 % params
8 patchSize = 8;
9 psf = fspecial('gaussian',7,1.6);
10 scale = 3;
11 noiseSD = 5/255;
12 betas = [1 2 4 8 16 32 64 128];
13 lambda = patchSize^2/noiseSD^2;
14
15 % models
16 load './input/GSModel_8x8_200_2M_noDC_zeromec
17 models = {GS,GS};
18
```

On the left, a file explorer shows "Source Files" with folders like "utilities\_image\_degra..." and "demo\_sr.m" selected. Below it, "Input Files" lists "SR\_test\_images" (1.98 MB), "GMM\_high.mat" (5.69 MB), and "GSModel\_8x8\_20.." (9.77 MB). On the right, the "Results" panel shows a search bar, a "Run" button, and a table of output files: "image.png" (42.64 KB), "Output" (1.14 KB), and "SRimage.png" (113.39 KB). The run time is listed as "0h 09m 05s | Nov 23, 2016 | 13:27".

# Redesign of Full-Text HTML Articles

- More prominent
  - article metrics
  - related articles
  - featured media
- Author's ORCID identifier & bio
- Metrics gallery
- Multimedia gallery

The screenshot displays the IEEE Xplore Digital Library interface for an article. The page features a blue header with navigation links like 'BROWSE', 'MY SETTINGS', 'GET HELP', 'WHAT CAN I ACCESS?', and 'SUBSCRIBE'. A search bar is prominently placed below the header. The article title is 'Article Title: Lorem Ipsum Dolor Sit Amet Sed Faucibus Augue Metus et Tempor Purus...'. Below the title, there are three metric boxes: '5 Cited in Papers', '4 Cited in Patents', and '9 Full Text Views'. An orange arrow points from the search bar area down to the 'Related Articles' section, which contains three article thumbnails. Another orange arrow points from the 'Full Text Views' box to the left. Below the authors list, there is a 'Metrics' tab selected among other tabs like 'Abstract', 'Authors', 'Figures', 'References', 'Citations', 'Keywords', 'Media', and 'Datasets'. The main content area shows a placeholder for an impact message and a paragraph of Lorem Ipsum text. On the right, there is a 'Media Title / Information' section with a video player thumbnail. An orange arrow points from the 'Metrics' tab to the video player. The footer of the page contains a placeholder for a graphical abstract.

# Secondary Author Affiliation

- Secondary author affiliations are now available on the new blended full text HTML/abstract page. Users will also be able to search for secondary authors based on their affiliation (like you would for a primary author).

Browse Journals & Magazines > IEEE Robotics and Automation ... > Volume: 2 Issue: 1

## A Reactive Walking Pattern Generator Based on Nonlinear Model Predictive Control

[Purchase or Sign In to View Full Text](#)

6 Author(s) ▼ M. Naveau ; ▼ M. Kudruss ; ▼ O. Stasse ; ▼ C. Kirches ; ▼ K. Mombaur ; ▼ P. Souères

Abstract Authors Figures

**M. Naveau**  
CNRS, LAAS, University de Toulouse, Toulouse, France

**M. Kudruss**  
Interdisciplinary Center for Scientific Computing, Heidelberg University, Heidelberg, Germany

[View All](#)

# NEW! Full-Text HTML for Standards

- Modern, mobile-friendly design
- Figures carousel
- Table of contents within Standard
- Search within a Standard
- Evolution of the Standard

## 2030.1.1-2015 - IEEE Standard Technical Specifications a DC Quick Charger for Use with Electric Vehicles

Status: **Active - Approved**

View Document

343  
Full  
Text Views

Abstract

**Figures**

References

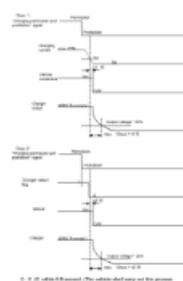
Citations

Keywords

Doc

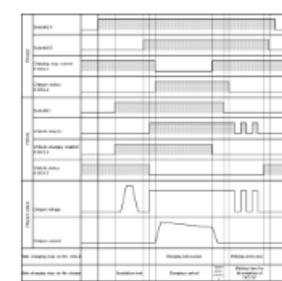
Media

Figure A.25



Requirement for voltage drop characteristic of charger output circuit (case 1: current drop driven; case 2: "Charger status" flag driven)

Figure A.26



CHARGER\_STATUS

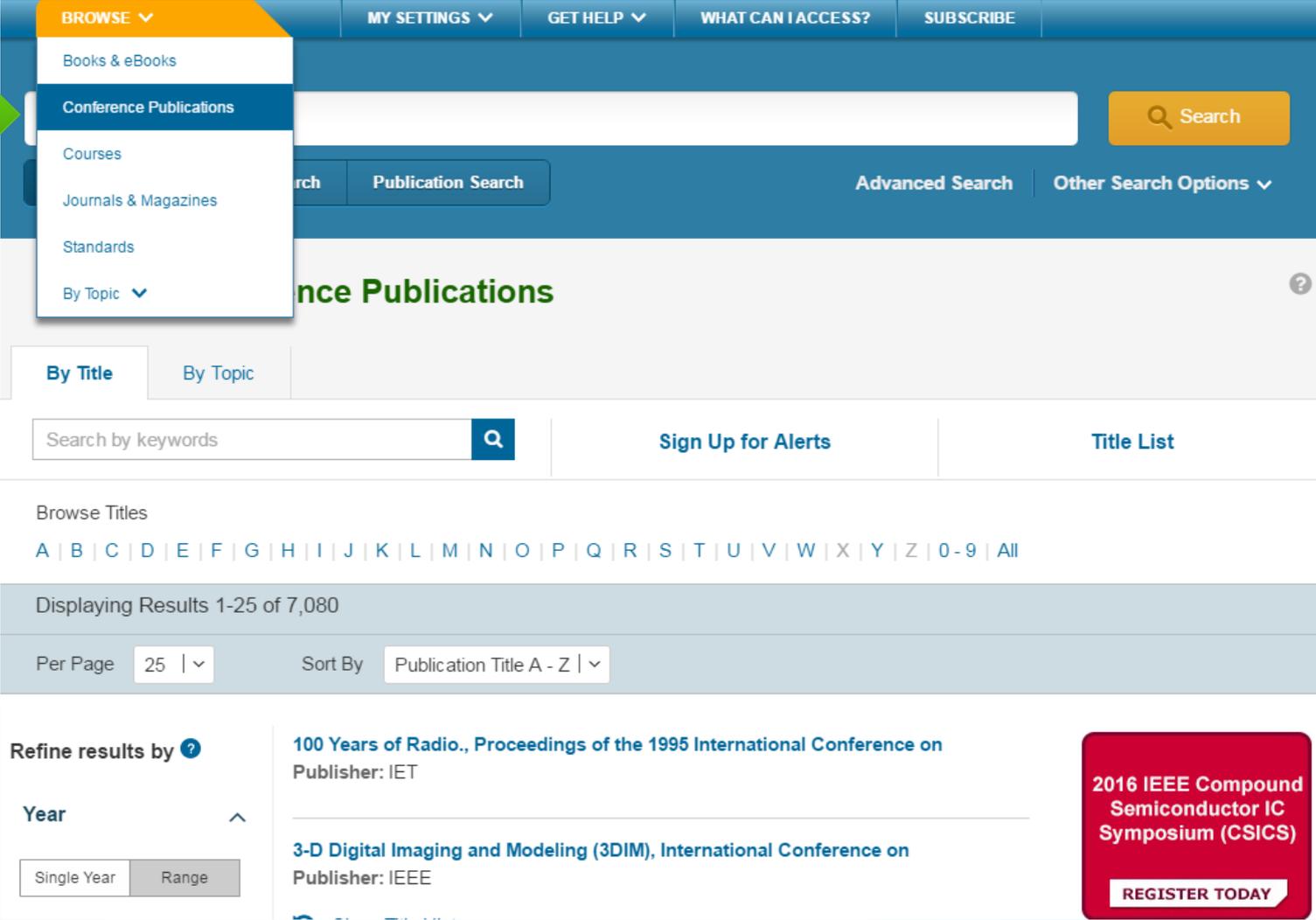
⏪ ⏴ ⏵ ⏩

☰ Contents

1. Scope
  2. Normative references
  3. Definitions
    - 3.1 Vehicle terms
    - 3.2 Charger terms
    - 3.3 Communications terms
  4. Conventions
    - 4.1 General
    - 4.2 Binary representation
    - 4.3 Hexadecimal representation
    - 4.4 Decimal representation
    - 4.5 Transmission sequence
    - 4.6 Formulas
    - 4.7 Units of measure
  5. Common requirements
    - 5.1 Background
    - 5.2 Requirements
- Annex A CHAdeMO specifications**
- A.1 Scope of application
  - A.2 Vehicle coupler
  - A.3 Installation conditions and main specifications
  - A.4 Requirements for basic design of the charger and the vehicle

☰ Contents

# Browsing the Table of Contents



The screenshot displays the IEEE Xplore database interface. At the top, a navigation bar includes links for 'BROWSE', 'MY SETTINGS', 'GET HELP', 'WHAT CAN I ACCESS?', and 'SUBSCRIBE'. A green arrow points to the 'BROWSE' dropdown menu, which is open and shows options: 'Books & eBooks', 'Conference Publications', 'Courses', 'Journals & Magazines', 'Standards', and 'By Topic'. Below the navigation bar is a search area with a search bar, a 'Search' button, and links for 'Advanced Search' and 'Other Search Options'. The main content area shows 'Conference Publications' with a search bar and a 'Sign Up for Alerts' button. Below this is a 'Browse Titles' section with a list of letters from A to Z, 0-9, and 'All'. The results section shows 'Displaying Results 1-25 of 7,080' and options for 'Per Page' (25) and 'Sort By' (Publication Title A - Z). A 'Refine results by' section is visible on the left, with a 'Year' filter. On the right, there is a red promotional banner for the '2016 IEEE Compound Semiconductor IC Symposium (CSICS)' with a 'REGISTER TODAY' button.

# Basic Search

BROWSE ▾

MY SETTINGS ▾

GET HELP ▾

WHAT CAN I ACCESS?

SUBSCRIBE

Search **4,013,572** items

Enter Search Term

 Search

Basic Search

Author Search

Publication Search

Advanced Search

Other Search Options ▾

- The Basic Search function searches **metadata only**
- Automatically ORs each search term
- Use quotes (“ ”) for an exact phrase
- Automatic stemming
- Case insensitive
- Type ahead (aka auto suggest) functionality

# Type Ahead Feature – Explore Related Topics

BROWSE ▾ MY SETTINGS ▾ GET HELP ▾ WHAT CAN I ACCESS? SUBSCRIBE

Search **4,013,572** items

smart

Smart Phones

Smart Power Grids

Smart Grids

Smart Cards

Smart Meters

Smart Homes

Smart Cities

Smart Cameras

Smart Pixels

Smart Grid Technologies - Asia (ISGT ASIA), 2015 IEEE Innovative

Smart Buildings

Smart Grid Communications (SmartGridComm), 2014 IEEE International Conference On

Smart Grid Communications (SmartGridComm), 2013 IEEE International Conference On

Smart Grid Communications (SmartGridComm) 2012 IEEE Third International Conference On

Search

More Search Options ▾

al Safety  
ailable

afeguarding of  
ance of electric and  
now available in  
17 NESC edition

➤

# Type Ahead Feature

- Type Ahead offers search suggestions as users type a term into a search box
- *Xplore* shows a maximum of 20 suggestions
- Ranking is based on “starts with”
- Based on a sub-set of fields:
  - Publication Title
  - Subject
  - Index Terms
- When a user selects one of the type-ahead terms, *Xplore* searches against all fields (Metadata)

# Search Results and Refinements



Displaying results 1-25 of 20,066 for **smart grid** x

Show  Per Page  Sort By

Select All on Page [Download Citations](#) | [Export](#) | [Set Search Alerts](#) | [Search History](#)

**Refine results by** ?

**Content Type** ^

- Conference Publications (15,734)
- Journals & Magazines (3,548)
- Early Access Articles (613)
- Books & eBooks (99)
- Standards (71)
- Courses (1)

**Year** ^

From  To

**Key technologies of smart distribution grid**

Youjie Ma; Feng Liu; Xuesong Zhou; Zhiqiang Gao  
2016 IEEE International Conference on Mechatronics and Automation  
Year: 2016  
Pages: 2639 - 2643, DOI: 10.1109/ICMA.2016.7558983  
**IEEE Conference Publications**

[Abstract](#) (195 Kb)

**The research on smart distribution grid**

Xuesong Zhou; Tianxiang Huang; Youjie Ma; Zhiqiang Gao  
2016 IEEE International Conference on Mechatronics and Automation  
Year: 2016  
Pages: 176 - 180, DOI: 10.1109/ICMA.2016.7558556  
**IEEE Conference Publications**

[Abstract](#) (247 Kb)

**Research review on smart distribution grid**

Xuesong Zhou; Haobo Cui; Youjie Ma; Zhiqiang Gao  
2016 IEEE International Conference on Mechatronics and Automation  
Year: 2016  
Pages: 575 - 580, DOI: 10.1109/ICMA.2016.7558627  
**IEEE Conference Publications**

[Abstract](#) (389 Kb)

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LTE

# IEEE Xplore Facets

Review list of facets:

- **Content Type:** Early Access and Draft Standards are a window into the future of technology
- **Author Affiliation:** Useful for competitive intelligence and to identify potential partners
- **Publication Title:** Helpful in identifying relevant conferences and journals to read

# New! Unified Abstract & HTML View

Browse Conferences > Power Electronics Conference ... ? Back to Results | Next >

## Moving towards the Smart Grid: The Norwegian case

[Purchase or Sign In to View Full Text](#) 82 Full Text Views ➔

4 Authors: [Olav B. Fosso](#); [Marta Molinas](#); [Kjell Sand](#); [Grete H. Coldevin](#) [View All Authors](#)

- Abstract**
- Authors
- Figures
- References
- Citations
- Keywords
- Metrics
- Media

**Related Articles**

- Automotive electrical systems- the power electroni...
- Table of contents
- Aspects of power electronics evolution in Europe

**Abstract:**  
Encompassing the global developments towards more sustainable and environment-friendly energy solutions for the future, Norway has been developing its own Smart Grid strategy. This strategy follows a path defined by the specific characteristics of the Norwegian energy system and the societal context. This article presents the Norwegian Smart Grid case by collecting the experiences and actions taken by industry, academic and research sectors. The role of power electronics technologies in smart grid research and in industry-driven innovation is also addressed in the paper.

**Published in:** [Power Electronics Conference \(IPEC-Hiroshima 2014 - ECCE-ASIA\), 2014 International](#)

**Date of Conference:** 18-21 May 2014 **INSPEC Accession Number:** 14525017

**Date Added to IEEE Xplore:** 07 August 2014 **DOI:** [10.1109/IPEC.2014.6869838](#)

**Electronic ISBN:** 978-1-4799-2705-0 **Publisher:** IEEE

▶ **ISSN Information:**

# View Figures

Abstract

Aut



Figures

References

Citations

Keywords

Metrics

Media

Fig.1.



Distributed generation system emulator set with control system in the laboratory

Fig. 2.

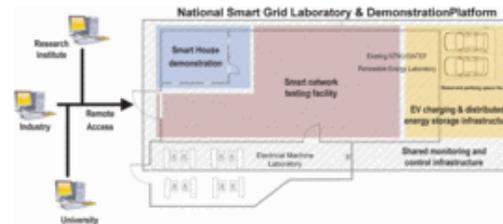
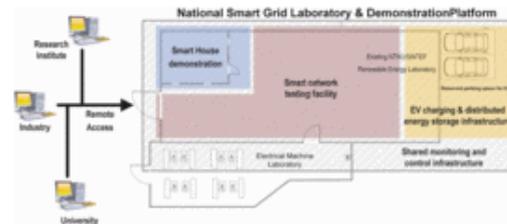


Fig. 2.



» View in Context

» View Full Size Image

Fig. 3.



Facilities of the demo norge distributed across



View All

# Equations: Copy Source Code

## The Test Case Prioritization Problem.

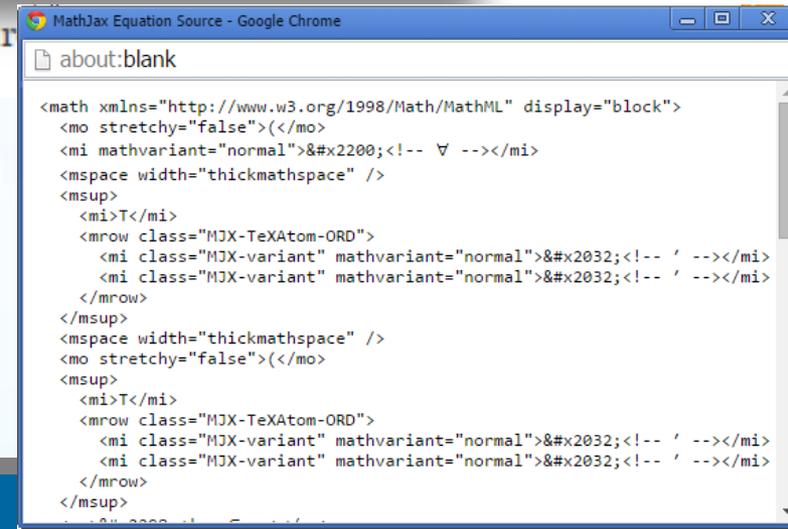
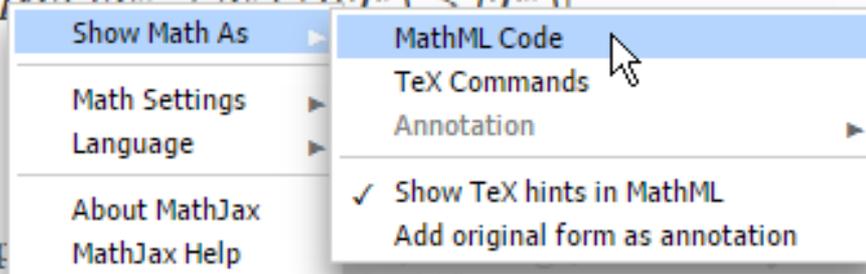
Given:  $T$ , a test suite;  $PT$ , the set of permutations of  $T$ ;  $f$ , a function from  $PT$  to the real numbers.

Problem: Find  $T' \in PT$  such that

$$(\forall T'' (T'' \in PT) (f(T'') > f(T') \rightarrow (T'' > T')))$$

▶ View Source ?

Here,  $PT$  represents the set of all permutations of  $T$ . The function  $f$  is a function that, applied to any such ordering, yields an award



# Equations: Zoom Function

## The Test Case Prioritization Problem.

Given:  $T$ , a test suite;  $PT$ , the set of permutations of  $T$ ;  $f$ , a function from  $PT$  to the real numbers.

Problem: Find  $T' \in PT$  such that

$$(\forall T'' (T'' \in PT) (T'' \neq T') [f(T') \geq (T'')]).$$

[View Source](#)

Here,  $PT$  represents the set of all possible prioritizations (orderings) of  $T$  and  $f$  is a function that, applied to any such ordering, yields an award value for that ordering.

MathJax context menu options:

- Show Math As
- Math Settings
- Language
- About MathJax
- MathJax Help
- Zoom Trigger
- Zoom Factor
- Math Renderer
- Scale All Math ...
- Hover
- Click
- Double-Click
- No Zoom
- Trigger Requires: Alt, Control, Shift

## The Test Case Prioritization Problem.

Given:  $T$ , a test suite;  $PT$ , the set of permutations of  $T$ ;  $f$ , a function from  $PT$  to the real numbers.

Problem: Find  $T' \in PT$  such that

$$(\forall T'' (T'' \in PT) (T'' \neq T') [f(T') \geq (T'')]).$$

[View Source](#)

Here,  $PT$  represents the set of all possible prioritizations (orderings) of  $T$  and  $f$  is a function that, applied to any such ordering, yields an award value for that ordering.

# References, Citations & Citation Map

[Browse Conferences](#) > Power Electronics Conference ... ?

[Back to Results](#) | [Next >](#)

## Moving towards the Smart Grid: The Norwegian case

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4

Author(s)

Olav B. Fosso ; Marta Molinas ; Kjell Sand ; Grete H. Coldevin

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**References**

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**References**

[Citation Map](#)

4. *Demo Norway is a collection of smart grid pilot projects coordinated by the Norwegian Smartgrid Centre with more than 10.000 pilot customers involved.*

5. "Norwegian Parliament extends electric car initiatives until 2018", *A VERE*, 09 2012.

6. *IEC/TR 60725 Consideration of reference impedances and public supply network impedances for use in determining the disturbance characteristics of electrical equipment having a rated current  $\leq 75$  A per phase.*



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# References, Citations & Citation Map

[Browse Conferences >](#) **Citation Map** [Back to Results](#) | [Next >](#)

**Moving towards the Smart Grid: The Norwegian case**

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Viewing: **Moving towards the Smart Grid: The Norwegian case**

4 Author(s) [Olav E...](#)

[Abstract](#)

**References**

4. *Demo Norway grid pilot projects in Norwegian Smart Grids with more than 10,000 participants*

**References in this Article**

- 1 AMS/
- 2 [online] Available: [www.energi21.no/](http://www.energi21.no/).
- 3 [online] Available: <http://smartgrids.no/>.
- 4 Demo Norway is a collection of smart grid pilot projects coordinated by the Norwegian Smartgrid Centre with more than 1...
- 5 Norwegian Parliament extends electric car initiatives until 2018

**Citations to this Article**

There are currently no citations for this article.

**This Article**

*...ation of and public ...ces for use in ...nce ical equipment 75 A per phase.*

# Keywords

Browse Conferences > Power Electronics Conference ... ?

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[References](#)

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**Keywords**

[Metrics](#)

[Media](#)

### IEEE Keywords

Monitoring,  
Context,  
Europe,  
Consumer electronics

### INSPEC: Controlled Indexing

smart power grids,  
power electronics

### INSPEC: Non-Controlled Indexing

power electronics technologies,  
smart grid,  
global developments,  
sustainable energy solutions,  
environment friendly energy solutions

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# Advanced Search - Affiliation & Fields

BROWSE ▾

MY SETTINGS ▾

GET HELP ▾

WHAT CAN I ACCESS?

## Advanced Search Options

Advanced Keyword/Phrases

Command Search

Citation Search

Preferences

### ENTER KEYWORDS OR PHRASES, SELECT FIELDS, AND SELECT OPERATORS

Note: Refresh page to reflect updated preferences.

Search :  Metadata Only  Full Text & Metadata ?

"smart grid" in Document Title ▾

AND ▾ NTNU in Author Affiliations ▾  

AND ▾ in Metadata Only ▾  

 Add New Line

Reset All

SEARCH

#### ▼ CONTENT FILTER

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- Authors
- Publication Title
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- Index Terms
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- Article Number
- Author Keywords
- DOE Terms
- DOI
- IEEE Terms
- INSPEC Controlled Terms
- INSPEC Non-Controlled Terms
- ISBN
- ISSN
- Issue
- MeSH Terms
- PACS Terms
- Parent Publication Number
- Publication Number
- Standard Number
- Standards Dictionary Terms
- Topic

# Advanced Search

- Access from the link below the Global Search Box
- Default searches the Metadata
- Can search Full-Text and Metadata by selecting radio button
- Can search within specific fields such as Author and Index Terms by using the drop down menu
- Can add up to ten search boxes
- Combine search terms/phrases with AND, OR, NOT
- Use ASCII "quotes" for an exact phrase
- Automatic Stemming
  - Pluralized nouns (computer=computers)
  - Verb tenses (run=running, ran, etc.)
  - British and American spelling variations (fiber=fibre)

# Asterisk (Wildcard) Rules

- The \* wildcard can be used at the end of a word, at the beginning of a word, or in the middle of a word
- Must have **at least 3 characters** to use the \* wildcard
- Can not use the \* wildcard when searching full-text
- Can not use the \* wildcard with proximity operators (NEAR and ONEAR)
- Can not use the \* wildcard within quotes for an exact phrase
- Limited to five \* wildcards per search
- Simulate\* will find simulates and simulated but NOT simulating
- Simulat\* will find simulating, simulated, simulates, simulator, simulation, etc.

# Command Search

BROWSE ▾

MY SETTINGS ▾

GET HELP ▾

WHAT CAN I ACCESS?

Search **4,013,572** items

Enter Search Term

Search

Basic Search

Author Search

Publication Search

Advanced Search

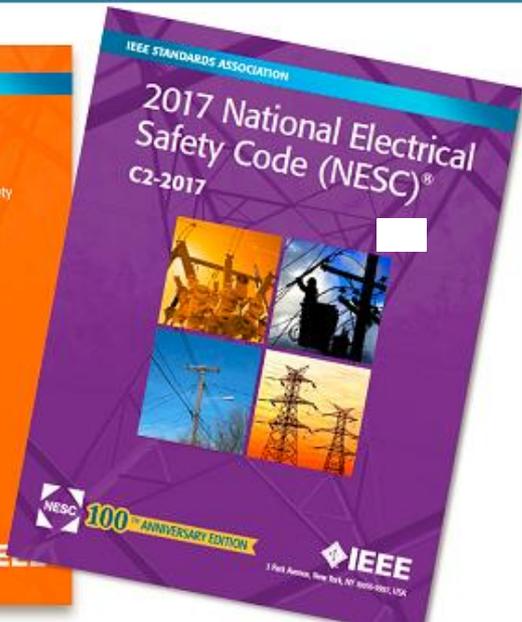
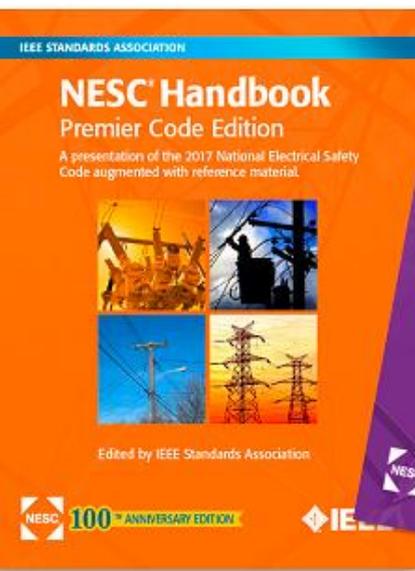
Other Search Options ▾

[Command Search](#)

[Citation Search](#)

[Search Alerts](#)

[Search History](#)



## 2017 National Electrical Safety Code (NESC) Now Available

The NESC—which sets the standard for practical safeguarding of persons during the installation, operation, or maintenance of electric and communication lines, and associated equipment—is now available in IEEE Xplore. [Learn how to get access to the 2017 NESC edition](#)



# Command Search

BROWSE ▾

MY SETTINGS ▾

GET HELP ▾

WHAT CAN I ACCESS?

## Advanced Search Options

Advanced Keyword/Phrases

Command Search

Citation Search

Preferences



### ENTER KEYWORDS, PHRASES, OR A BOOLEAN EXPRESSION

Note: Use the drop down lists to generate the correct Operator and Data Field Codes.

This wizard will NOT build your expression. [View examples of how to write a boolean search string](#)

Search :  Metadata Only  Full Text & Metadata

Data Fields ▾

Operators ▾

"smart grid" NEAR/5 example|

### SEARCH GUIDELINES

Operators need to be in all caps  
– i.e. AND/OR/NOT/NEAR.

Asterisk wildcards cannot be  
used within quotes or with the  
NEAR/ONEAR operators.

There is a maximum of 15 search  
terms.

Reset All

SEARCH

### LEARN MORE ABOUT

- » [Data Fields](#) »
- » [Search Examples](#) »
- » [Search Operators](#) »
- » [Search Guidelines](#) »

# Command Search – “AND” vs. “NEAR” in Metadata Only

Displaying results 1-25 of 800 for ("**smart grid**" AND example) x

Show All Results | Per Page 25 | Sort By Relevance

Select All on Page | [Download Citations](#) | [Export to IEEE Collabratec](#) | [Set Search Alerts](#) | [Search History](#)

Displaying results 1-25 of 57 for ("**smart grid**" NEAR/5 example) x

Show All Results | Per Page 25 | Sort By Relevance

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**800 results (AND) vs. 57 (NEAR)**

# Command Search – “AND” vs. “NEAR” in Full Text

Displaying results 1-25 of 23,955 for ("**smart grid**" AND example) ✕

Show  | ▾ Per Page  | ▾ Sort By  | ▾

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Displaying results 1-25 of 854 for ("**smart grid**" NEAR/5 example) ✕

Show  | ▾ Per Page  | ▾ Sort By  | ▾

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**23,955 results (AND) vs. 854 (NEAR)**

# Command Search

Operator	Syntax	Find Results That...
AND	$x \text{ AND } y$	Match both expressions $x$ and $y$ <b>Example:</b> “wireless sensor network” AND security Finds articles with both the phrase <i>wireless sensor network</i> and the word <i>security</i>
OR	$x \text{ OR } y$	Match either expression $x$ or $y$ or both <b>Example:</b> REV OR “renewable energy vehicle” Finds articles with either the word <i>REV</i> or the phrase <i>renewable energy vehicle</i>
NOT	$x \text{ NOT } y$	Match expression $x$ but <i>not</i> $y$ <b>Example:</b> gasoline NOT diesel Finds articles that include the word <i>gasoline</i> but do not include the word <i>diesel</i>
NEAR	$x \text{ NEAR}/\# y$	Match expression $x$ within $\#$ words of $y$ ( $x$ can appear before or after $y$ - NEAR does not designate order) <b>Example:</b> cardiac NEAR/3 implantable Finds articles with the word <i>cardiac</i> within three words of <i>implantable</i> ; cardiac can come before or after implantable.
ONEAR	$x \text{ ONEAR}/\# y$	Match expression $x$ <i>before</i> and within $\#$ words of $y$ (ONEAR does designate order) <b>Example:</b> cardiac ONEAR/3 implantable Finds articles with the word <i>cardiac</i> within three words of <i>implantable</i> ; cardiac must come before implantable.

# Author Search

BROWSE ▾

MY SETTINGS ▾

GET HELP ▾

WHAT CAN I ACCESS?

Search **4,013,572** items

David

Root

Search

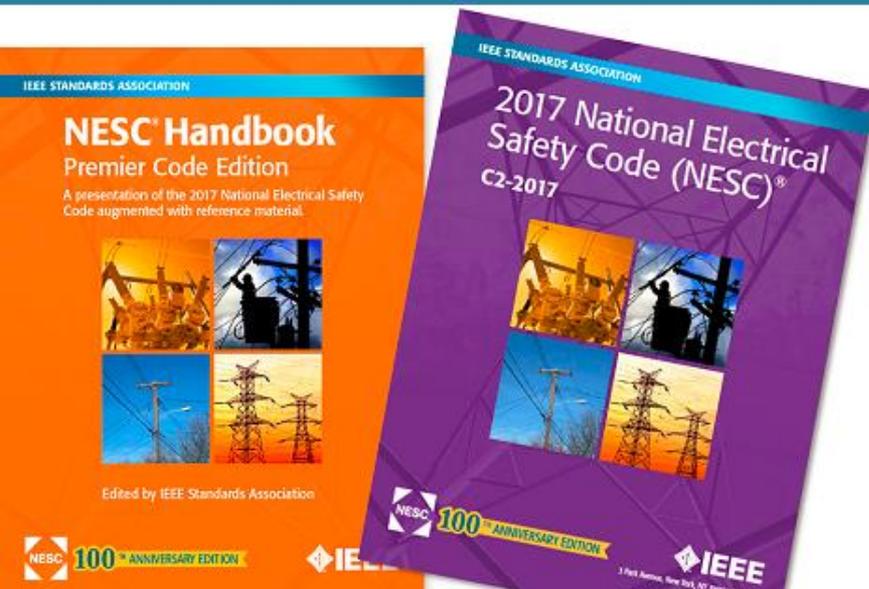
Basic Search

Author Search

Publication Search

Advanced Search

Other Search Options ▾



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# Author Search

BROWSE ▾ MY SETTINGS ▾ GET HELP ▾ WHAT CAN I ACCESS? SUBSCRIBE

David Root  Search

Basic Search **Author Search** Publication Search Advanced Search Other Search Options ▾

Displaying results 1-25 of 63 for "Authors": Root, David "First Name": David ✕ "Last Name": Root ✕

Show All Results ▾ Per Page 25 ▾ Sort By Relevance ▾

Select All on Page [Download Citations ▾](#) | [Export to IEEE Collabratec ▾](#) | [Set Search Alerts ▾](#) | [Search History](#)

## Refine results by

Search within results 

### Content Type

- Conference Publications (51)
- Journals & Magazines (12)

- Device modeling for III-V semiconductors - an overview**   
D. E. Root; M. Iwamoto; J. Wood  
Compound Semiconductor Integrated Circuit Symposium, 2004. IEEE  
Year: 2004  
Pages: 279 - 282, DOI: 10.1109/CSICS.2004.1392567  
Cited by: Papers (4)  
**IEEE Conference Publications**

▶ Abstract [\(\(html\)\)](#)  (642 Kb) 

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# Author Search

- **Author search interface:** Select “Author Search” to reveal search fields for First Name, Middle Initial, and Last Name.
- **Recall of results:** Searching for David Root will also retrieve any articles this individual published under D. Root, D.E. Root, or any other variation.
- **Filter and refine search results:** Refine your search by choosing a normalized author name in the author facet on the search results page to retrieve any article linked to that author, regardless of the original name variation used on the article. The name displayed in the author facet is the longest possible version of the author’s name (in our example: David E. Root).

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Cart(1) | [Create Account](#) |  [Sign In](#)



To take advantage of personalization features, such as search preferences and saved search alerts, users need to create an IEEE account by selecting the “Create Account” link on the top of any IEEE web page.

# IEEE Personal Account Registration

**Register for an IEEE Account** ?

\*Required fields

---

**Provide your personal information**

\*Given/First name:

\*Last/Family/Surname:

**Enter e-mail address & password**

The e-mail address provided here will be the username of your account

\*E-mail address:

\*Re-enter e-mail address:

\*Password:

\*Confirm Password:

What is a valid password?

---

**Set security questions** ?

For your security, IEEE Accounts are required to have two security questions and answers.

\*Security question 1:

\*Type Your Answer:

\*Security question 2:

\*Type Your Answer:

The IEEE account registration process is an easy 3-click process – just fill out your First Name, Last Name, email address, password and two security questions. Your username is your email address.

# Set Preferences with a Personal Account

IEEE Xplore®  
Digital Library

> Institutional Sign In

IEEE

BROWSE ▾ MY SETTINGS ▾ GET HELP ▾ WHAT CAN I ACCESS?

## Preferences

**Search Options**

Search History Recording:  
 On  
 Off

Publisher:  
 IEEE Content  
 IEEE Xplore Content  
 IEEE Xplore Content  
 IEEE Xplore Content  
 IEEE Xplore Content  
 TUP Content  
 BIAI Content  
 MITP Content  
 Alcatel-Lucent Content  
 Morgan & Claypool

Search:  
 Metadata Only  
 Full Text & Metadata

**Display Options for Search Results**

Results Layout:  
 Title Only  
 Title & Citation (Default)  
 Title, Citation & Abstract

Results per Page:  
25 ▾

Sort By:  
Relevance ▾

**Download Options**

Bibliographic Citation Format Include:  
 Citation Only  
 Citation & Abstract

Format:  
 Plain Text  
 BibTeX  
 RefWorks  
 EndNote, ProCite, RefMan

**Email Setting Options**

Email Address:  
paulshenriques@gmail.com  
*This will only be used for receiving e-mail alerts from IEEE Xplore. Changing this will not affect the e-mail address associated with your IEEE Account.*

Email Format:  
 Plain Text  
 HTML

Update Cancel

**Please Note:** These preferences will only be applied when signed into IEEE Xplore with your personal username and password. The option to restrict results to a selected publisher does not apply to all search interfaces. [Find out more.](#)

Journals & Magazines Conference Publications Standards Books & eBooks Education & Learning

# Features to save IEEE content:

- Download citation to build a bibliography
- Export Results into a multi field CSV download. Limit of 2000 records
- Saved Searches/Set Alert (IEEE Personal Account). Search is run every Friday. Limit of 15 searches
- Export to IEEE Collabratec

# IEEE Xplore Demonstration

## ■ Alerts

- Stay up to date on the latest trends, competitor activity, etc.
- Show a screenshot of an alert relevant to the prospect's area of research

## ■ Browse

- Highlight relevant conferences, journals, and standards
- Users can identify subject matter experts by using the eLearning module and then search for additional papers that they've written in *Xplore*

# Saved Searches/Table of Content Alerts

The screenshot displays the IEEE Xplore search interface. At the top, there are navigation tabs: BROWSE, MY SETTINGS, GET HELP, and WHAT CAN I ACCESS?. A search bar contains the text 'cloud computing'. Below the search bar are buttons for 'Basic Search', 'Author Search', and 'Publication Search'. A 'Search' button is on the right. A 'Set Alert' dialog box is open, showing 'Search Alert Name \*' as 'Cloud computing' and 'Email Address' as 'paulshenriques@gmail.com'. The dialog has 'Cancel' and 'Save' buttons. Below the search bar, it says 'Displaying Results 1-25 of 5,356 for cloud computing x security x'. There are filters for 'Show All Results', 'Per Page 25', and 'Sort By'. A green arrow points to the 'Set Search Alerts' link in the navigation bar. On the left, there is a 'Refine results by' section with a search box and a 'Content Type' filter. The main results area shows two entries: 'Security threats in cloud computing' and 'Collaboration-Based Cloud Computing Security Management Framework'. On the right, there are promotional banners for IEEE Xplore and a free eLearning library.

**Set Alert**  
Search Alert Name \*  
Cloud computing  
Email Address  
paulshenriques@gmail.com  
Cancel Save

Displaying Results 1-25 of 5,356 for **cloud computing** x **security** x

Show All Results | Per Page 25 | Sort By

Select All on Page | Download Citations | **Set Search Alerts** | Search History | Export to CSV

**Refine results by**

Search within results

**Content Type**

- Conference Publications (4,805)
- Journals & Magazines (467)
- Early Access Articles (65)
- Books & eBooks (14)
- Courses (5)

**Security threats in cloud computing**  
Shaikh, F.B.; Haider, S.  
Internet Technology and Secured Transactions (ICITST), 2011 International Conference for  
Year: 2011  
Pages: 214 - 219  
Cited by: Papers (10)  
**IEEE Conference Publications**  
Abstract | HTML | PDF (606 Kb) | Copyright | Share

**Collaboration-Based Cloud Computing Security Management Framework**  
Almorsy, M.; Grundy, John; Ibrahim, A.S.  
Cloud Computing (CLOUD), 2011 IEEE International Conference on  
Year: 2011

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# Saved Searches/Table of Content Alerts

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**Set Alert**  
Search Alert Name \*  
Cloud computing  
Email Address  
paulshenriques@gmail.com  
Cancel Save

Displaying Results 1-25 of 5,356 for **cloud computing** x **security** x

Show All Results | Per Page 25 | Sort By

Select All on Page | Download Citations | **Set Search Alerts** | Search History | Export to CSV

**Refine results by**

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Internet Technology and Secured Transactions (ICITST), 2011 International Conference for  
Year: 2011  
Pages: 214 - 219  
Cited by: Papers (10)  
**IEEE Conference Publications**  
Abstract | HTML | PDF (606 Kb) | Copyright | Share

**Collaboration-Based Cloud Computing Security Management Framework**  
Almorsy, M.; Grundy, John; Ibrahim, A.S.  
Cloud Computing (CLOUD), 2011 IEEE International Conference on  
Year: 2011

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# Saved Searches: Tips

- Users can save any search from the search results page
- Access Saved Searches from the My Settings drop-down menu
- Each user can save up to 15 searches
- Broad searches work best
- Any refinements made on the search results page will be included in the saved searches
- Do not use the publication date field or facet (or the saved search will expire at the end of the year)
- Users will receive an email once a week with a link to any new content added to *Xplore* that meets their search criteria

# Organize Your Research with IEEE Collabratec

Displaying results 1-25 of 229 for **((IGBT OR gallium nitride OR insulated gate bipolar) AND (hybrid electric vehicle OR HEV))** x

Show  | Per Page  | Sort By

Select All on Page | Download Citations | **Export to IEEE Collabratec** | Set Search Alerts | Search History

**Refine results by** ?

Search within results

**Content Type** ^

Conference Publications (200)

**A novel rotor-permanent magnet flux-s**  
Wei Hua; Peng Su; Gan Zhang; Ming Chen  
Ecological Vehicles and Renewable Energy  
Conference on  
Year: 2015  
Pages: 1 - 10, DOI: 10.1109/EVER.2015.7112960  
**IEEE Conference Publications**

▶ Abstract ((html)) (3407 Kb)

You have selected 25 citation(s) for export to IEEE Collabratec™

Standards Dictionary Terms

**25 records successfully exported.**

IEEE Customer  
» Sign Out

# Export Documents to Collabratec

Menu 1 Cart | Sign Out

## Library

Documents | Library Settings | Tools

Showing 1 – 25 of 530 Add

Filters	<input type="checkbox"/> Select All	Author	Document Title	Publication Title	Year
<input checked="" type="radio"/> All	<input type="checkbox"/>	Hussein, K.	New compact, high performance 7 <sup>th</sup> Generation IGBT module with direct liquid cooling for EV/HEV inverters	Applied Power Electronics Conference and Exposition (APEC), 2015 IEEE	2015
<input type="radio"/> Recently Added	<input type="checkbox"/>	Mingkai Mu	Design of integrated transformer and inductor for high frequency dual active bridge GaN Charger for PHEV	Applied Power Electronics Conference and Exposition (APEC), 2015 IEEE	2015
<input type="radio"/> Incomplete Records	<input type="checkbox"/>	Marcinkowski, Jacek	Dual-sided Cooling for Automotive Inverters - Practical Implementation with Power Module	PCIM Europe 2015; International Exhibition and Conference for Power Electronics, Intelligent Motion, Renewable Energy and Energy Management; Proceedings of	2015
<input type="radio"/> To Review					
<input type="radio"/> Favorites					
<input type="radio"/> My Publications					
<input type="radio"/> Recommended					

Type

- Conference Article (363)

# Resources and Help Section



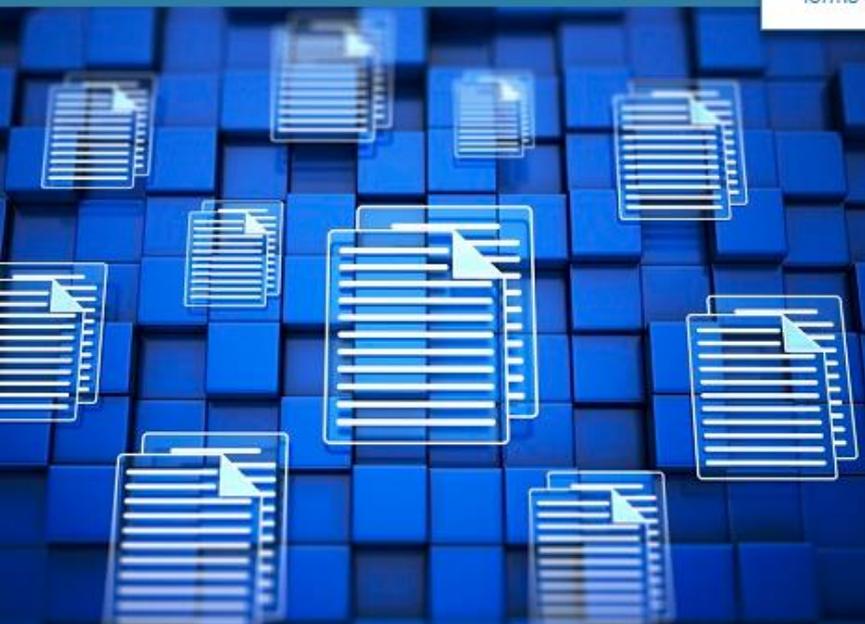
The screenshot shows the top navigation bar of the IEEE Xplore website. The navigation bar includes the following elements:

- BROWSE** (with a dropdown arrow)
- MY SETTINGS** (with a dropdown arrow)
- GET HELP** (with a dropdown arrow)
- WHAT CAN I ACCESS?**

The 'GET HELP' dropdown menu is open, displaying the following options:

- About IEEE Xplore
- Feedback
- Technical Support
- Resources and Help** (highlighted in blue)
- Terms of Use

Below the navigation bar, there is a search bar with the placeholder text 'Enter Search Term' and a 'Search' button. To the left of the search bar, there are tabs for 'Basic Search', 'Author Search', and 'Full Text Search'. A green arrow points to the 'Full Text Search' tab. To the right of the search bar, there are links for 'Advanced Search' and 'Other Search Options' (with a dropdown arrow). The text '72 items' is visible to the right of the search bar.



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# Resources and Help

## Resources and Help

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- » Blended Abstract & Full Text HTML
- » Secondary Author Affiliation
- » ORCID Author ID

### Popular Topics

- » Working with Documents
- » Search History
- » Advanced Search
- » Setting Search Preferences

### Quick Links



Create a personal account



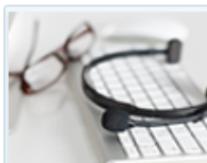
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- » Manuscript Submission Guidelines
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- » Training for your Organization
- » Promoting your Subscription
- » Request an Institutional Administration Account
- » Usage Reports

### Researchers



- » Content Alerts
- » Command Search
- » IEEE Collabratec

# Client Services Page (via Resources and Help Section)

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- Personalization Settings
- Browsing IEEE Xplore
- Searching IEEE Xplore
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- Administrators & Librarians
- » [Client Services Team](#)
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- » Account Management
- » Usage Reports
- » Discovery Services
- » Title Lists
- » OpenURL Link Resolvers
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- Online Forms
- Submitting Manuscript

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- » Promote Your Subscription
- » IEEE Client Services Team
- » Social Media Networks for IEEE Xplore

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---

# Why Publish with the IEEE?

---

Displaying results 1-25 of 1,904 for ("Author Affiliations":Nizhny Novgorod) x

Show All Results | v

Per Page 25 | v

Sort By Relevance | v

Select All on Page

[Download PDFs](#) v | [Export](#) v | [Set Search Alerts](#) v | [Search History](#)

## Refine results by ?

Search within results 

### Content Type ^

- Conference Publications (1,652)
- Journals & Magazines (250)
- Early Access Articles (2)

### Year ^

Single Year Range



From To

1991

2017

**An X-band gigawatt amplifier** 

E. B. Abubakirov; A. N. Denisenko; M. I. Fuks; N. G. Kolganov; N. F. Kovalev; M. I. Petelin; A. V. Savelyev; E. Schamiloglu; E. I. Soluyanov; V. V. Yastrebov  
[IEEE Transactions on Plasma Science](#)

Year: 2002, Volume: 30, Issue: 3

Pages: 1041 - 1052, DOI: 10.1109/TPS.2002.801601

Cited by: [Papers \(27\)](#)

#### IEEE Journals & Magazines

► [Abstract](#) [\(\(html\)\)](#)  (862 Kb) 

**High-power UV light generation in picosecond pulse trains** 

Mikhail Martyanov; Marta Divall; Ekaterina Gacheva; Christoph Hessler; Valentin Fedosseev

[2013 Conference on Lasers & Electro-Optics Europe & International Quantum Electronics Conference CLEO EUROPE/IQEC](#)

Year: 2013

Pages: 1 - 1, DOI: 10.1109/CLEOE-IQEC.2013.6800883

#### IEEE Conference Publications

► [Abstract](#) [\(\(html\)\)](#)  (395 Kb) 

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for science & technology

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for students

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- 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

Publish

# IEEE journal or IEEE conference?

## IEEE Journals



- IEEE journals are cited 3 times more often in patent applications than other leading publisher's journals



- A high percentage of articles submitted to any professional publication are rejected

## IEEE Conferences

- IEEE Conference proceedings are recognized worldwide as the most vital collection of consolidated published articles in EE, computer science, related fields
- 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

# Duplicate Publication

- IEEE's policy on duplicate publication states
  - *"authors should only submit original work that has neither appeared elsewhere for publication, nor which is under review for another refereed publication. If authors have used their own previously published work(s) as a basis for a new submission, they are required to cite the previous work(s) and very briefly indicate how the new submission offers substantively novel contributions beyond those of the previously published work(s)."*

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SEARCH

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- [Special Issue on Manipulation, Manufacturing and Measurement on the Nanoscale](#)

2.718

Impact  
Factor

0.04492

Eigenfactor

1.538

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.

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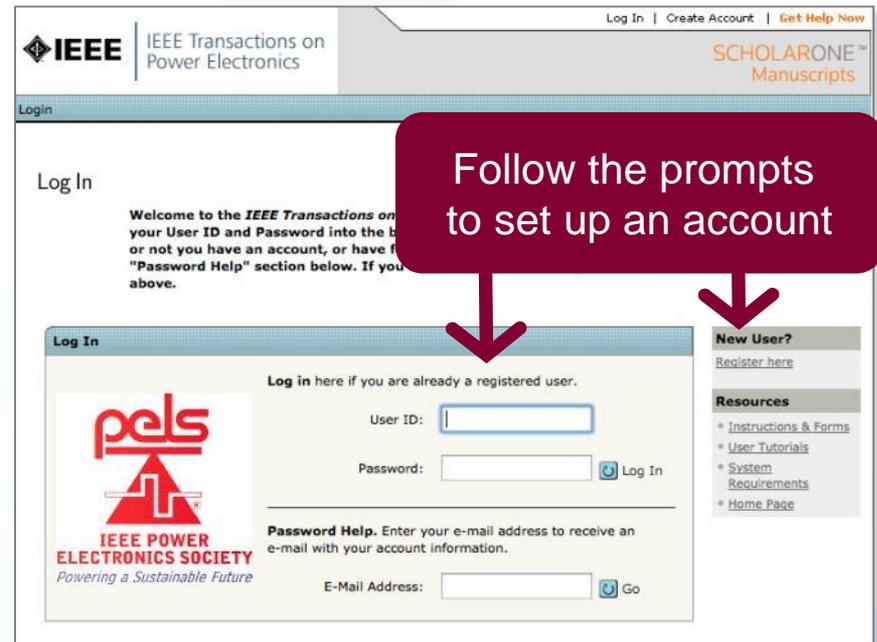


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4.08 Impact Factor	0.0264 Eigenfactor	0.961 Article Influence Score
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Follow the prompts to set up an account

A screenshot of the IEEE Transactions on Power Electronics website. The page has a header with the IEEE logo and "SCHOLARONE Manuscripts". Below the header is a "Log In" section with a welcome message and a "Log In" button. To the right is a "New User?" section with a "Register here" link. Below the "Log In" section is a form with fields for "User ID", "Password", and "E-Mail Address", each with a "Go" button. There is also a "Log In" button next to the password field. The IEEE Power Electronics Society logo is on the left side of the form.

Submit

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**Conference Details**

<b>Dates</b>	09 Oct - 12 Oct 2012
<b>Location</b>	Seoul Olympic Parktel Seoul, Korea (South)
<b>Web site</b>	<a href="http://www.vppc2012.org">www.vppc2012.org</a>
<b>Contact</b>	Min Jung Kim Room 901, Science & Technology Building, 635-4, Yucksam-Dong, Kangnam-Ku Korea (South) Seoul 135-703 +82 70 8222 3371 +82 10 9156 3571 +82 2 3412 8723 (fax) secretariat@vppc2012.org
<b>Conference #</b>	20159
<b>Attendance</b>	450

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# Structure

# Paper Structure

## Elements of a manuscript

Title

Abstract

Keywords

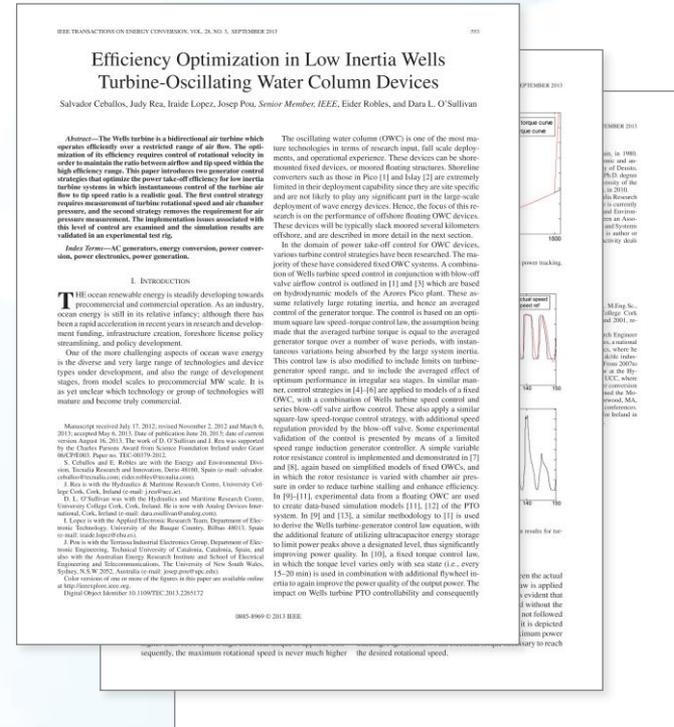
Introduction

Methodology

Results/Discussions/Findings

Conclusion

References



# 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

Good  
Title

VS.

Bad  
Title

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

# Good vs. Better Title

An Investigation into the Effects of Residential Air-Conditioning Maintenance in Reducing the Demand for Electrical Energy

**VS**

*"Role of Air-Conditioning Maintenance on Electric Power Demand"*

# 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

**What you did**

**Why you did**

**Why they're useful & important & move the field forward**

**How the results were useful, important & move the field forward**

# Abstract: #

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The abstract must be a **concise yet comprehensive reflection of what is in your article**. In particular, the abstract must be as follows.

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- 2) Between **150-250 words**. Be sure that you adhere to these limits; otherwise, you will need to edit your abstract accordingly.
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- 4) Should include **three or four different keywords or phrases**, as this will help readers to find it. It is important to avoid over-repetition of such phrases as this can result in a page being rejected by search engines.
- 5) Ensure that your abstract **reads well and is grammatically correct**.

# 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

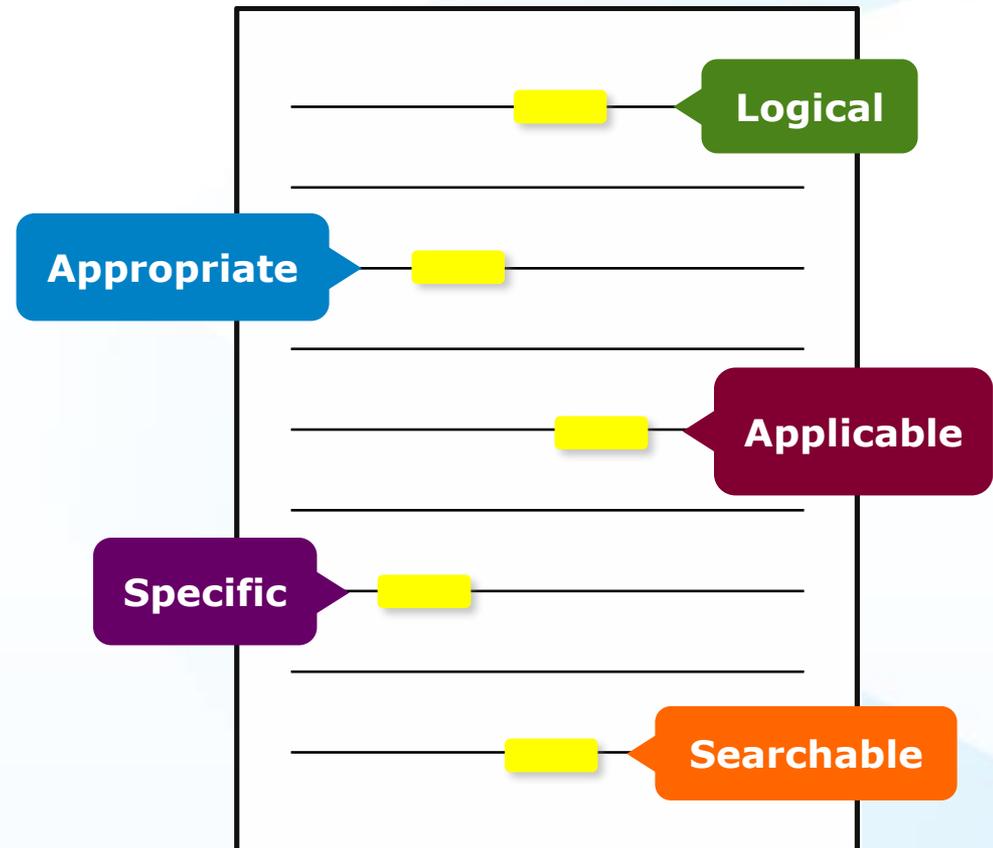
This paper presents and assesses a framework for an engineering capstone design program. **We explain** how student preparation, project selection, and instructor mentorship are the three key elements that must be addressed before the capstone experience is ready for the students. **Next, we describe** 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 Keywords

Bit rate, Decoding, Encoding, Parallel processing, Video coding

## Authors Keywords

High Efficiency Video Coding (HEVC), parallel programming, video coding

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### **INSPEC: Controlled Indexing**

parallel processing, video coding

---

### **INSPEC: Non-Controlled Indexing**

12-core system, H.264-advanced video coding, HEVC parallelization approaches, OWF, WPP, frequency 3.33 GHz, high efficiency video coding, overlapped wavefront, parallel efficiency, parallel friendliness, parallel scalability, parallelization proposals, tiles, wavefront parallel processing

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# Paper Structure

## Introduction

- A description of the problem you researched
- It should move step by step through, should be written in present tense:

Generally known information about the topic

Prior studies' historical context to your research

Your hypothesis and an overview of the results

How the article is organized

- The introduction should **not be**
  - Too broad or vague
  - More than 2 pages

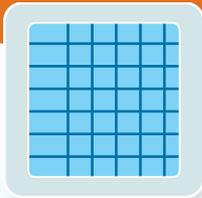
# Paper Structure

## 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



### Graphs

Show relationships between data points or trends in data



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Abstract

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Fig.1.



Distributed generation system emulator set with control system in the laboratory

Fig. 2.

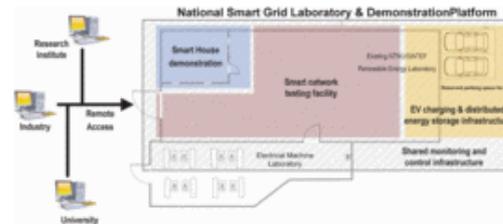
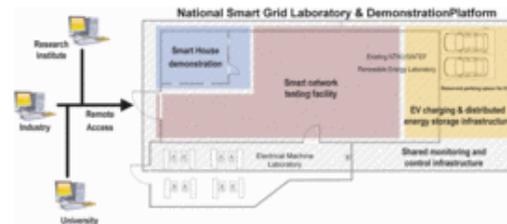


Fig. 2.



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Fig. 3.



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# Equations: Copy Source Code

## The Test Case Prioritization Problem.

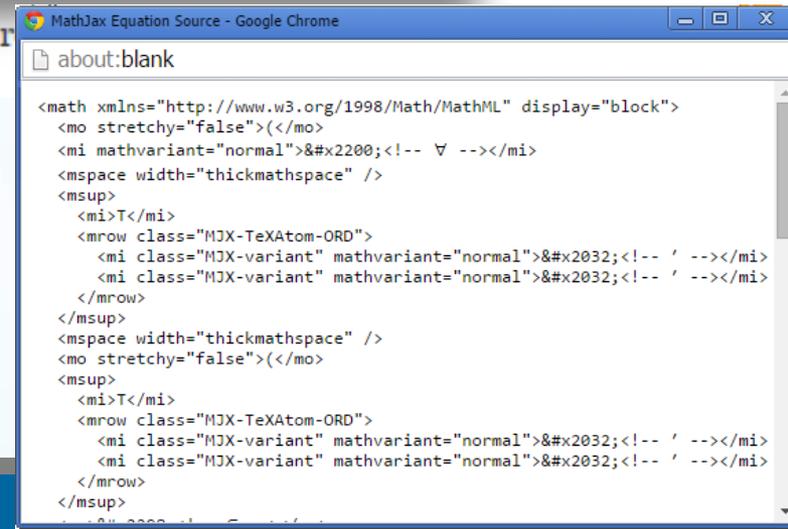
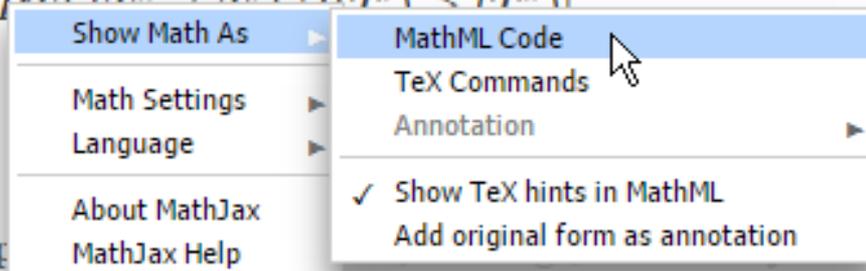
Given:  $T$ , a test suite;  $PT$ , the set of permutations of  $T$ ;  $f$ , a function from  $PT$  to the real numbers.

Problem: Find  $T' \in PT$  such that

$$(\forall T'' (T'' \in PT) (f(T'') > f(T') \rightarrow (T'' > T')))$$

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Here,  $PT$  represents the set of all permutations of  $T$ . The function  $f$ , when applied to any such ordering, yields an award.



# Equations: Zoom Function

## The Test Case Prioritization Problem.

Given:  $T$ , a test suite;  $PT$ , the set of permutations of  $T$ ;  $f$ , a function from  $PT$  to the real numbers.

Problem: Find  $T' \in PT$  such that

$$(\forall T'' (T'' \in PT) (T'' \neq T') [f(T') \geq (T'')]).$$

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Here,  $PT$  represents the set of all possible prioritizations (orderings) of  $T$  and  $f$  is a function that, applied to any such ordering, yields an award value for that ordering.

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Here,  $PT$  represents the set of all possible prioritizations (orderings) of  $T$  and  $f$  is a function that, applied to any such ordering, yields an award value for that ordering.

# 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

## Discussion

## Results

the SC algorithm over the whole range of  $w$  values increase to 3–4 K, except for the TIGR<sub>1+11</sub> database, with an RMSE of 2 K. This last result is explained by the  $w$  distribution, which is biased toward low values of  $w$  in this database. When only atmospheric profiles with  $w$  values lower than  $3 \text{ g} \cdot \text{cm}^{-2}$  are selected, the SC algorithm provides RMSEs around 1.5 K, with almost equal values of bias and standard deviation, around 1 K in both cases (with a negative bias, thus the SC underestimates the LST). In contrast, when only  $w$  values higher than  $3 \text{ g} \cdot \text{cm}^{-2}$  are considered, the SC algorithm provides RMSEs higher than 5 K. In these cases, it is preferable to calculate the atmospheric functions of the SC algorithm directly from (3) rather than approximating them by a polynomial fit approach as given by (4).

### V. DISCUSSION AND CONCLUSION

The two Landsat-8 TIR bands allow the intercomparison of two LST retrieval methods based on different physical assumptions, such as the SC (only one TIR band required) algorithms (two TIR bands required). Direct inversion of the transfer equation, which can be considered a “ground-truth” algorithm, is assumed to be a “ground-truth” algorithm because the information about the  $\tau$  and  $L_{\text{w}}$  is accurate enough. The SC algorithm in this letter is a combination of the previous SC algorithm developed for Landsat-4 and Landsat-5 TM sensors, and the ETM+ sensor on board the Landsat-7 platform [9], and it could be used to generate consistent LST products from the historical Landsat data using a single algorithm. An advantage of the SC algorithm is that, apart from surface emissivity, only water vapor content is required as input. However, it is expected that errors on LST become unacceptable for high water vapor contents (e.g.,  $> 3 \text{ g} \cdot \text{cm}^{-2}$ ). This problem can be partly solved by computing the atmospheric functions directly from  $\tau$ ,  $L_{\text{w}}$ , and  $L_{\text{w}}$  values (see [5]), or also by including air temperature as input [15]. A main advantage of the SW algorithm is that it performs well over global conditions and, thus, a wide range of water vapor values; and that it only requires water vapor as input (apart from surface emissivity at the two TIR bands). However, the SW algorithm can be only applied to the new Landsat-8 TIRS data, since previous TM/ETM sensors only had one TIR band.

The LST algorithms presented in this letter were tested with simulated data sets obtained for a variety of global atmospheric conditions and surface emissivities. The results showed RMSE values of typically less than 1.5 K, although for the SC algorithm, this accuracy is only achieved for  $w$  values below  $3 \text{ g} \cdot \text{cm}^{-2}$ . Algorithm testing also showed that the SW errors are lower than the SC errors for increasing water vapor, and vice versa, as demonstrated in the simulation study presented in Sobrino and Jimenez-Munoz [18]. Although an extensive validation exercise from *in situ* measurements is required to assess the performance of the two LST algorithms, the results obtained for the simulated data, the sensitivity analysis, as well as the previous findings for algorithms with the same mathematical structure give confidence in the algorithm accuracies estimated here.

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# 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



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We then have

$$\begin{aligned} (P_1^{n+} + P_1^{n-})^2 - (P_1^{n+} - P_1^{n-})^2 + 4P_1^{n+}P_1^{n-} \\ < (P_1^{n+} - P_1^{n-})^2 + 4P_1^{n+}P_1^{n-} \\ - (P_1^{n+} + P_1^{n-})^2 \end{aligned} \quad (32)$$

Since  $P_1^{n+} - P_1^{n-} = P_1^{n+} - \hat{P}_1^{n-}$ , we then have  $P_1^{n+} < P_1^{n+}$ , and  $P_1^{n-} < P_1^{n-}$ . Because the operational cost is an increasing function of  $\{P_1^{n+}, P_1^{n-}\}$ , we obtain that

$$c_{opt}(P_1^{n+}, P_1^{n-}) < c_{opt}(\hat{P}_1^{n+}, \hat{P}_1^{n-}). \quad (33)$$

Therefore the optimal pair  $\{P_1^{n+}, P_1^{n-}\}$  must satisfy that  $P_1^{n+}P_1^{n-} = 0$ , i.e., only one of  $P_1^{n+}, P_1^{n-}$  can be non-zero. ■

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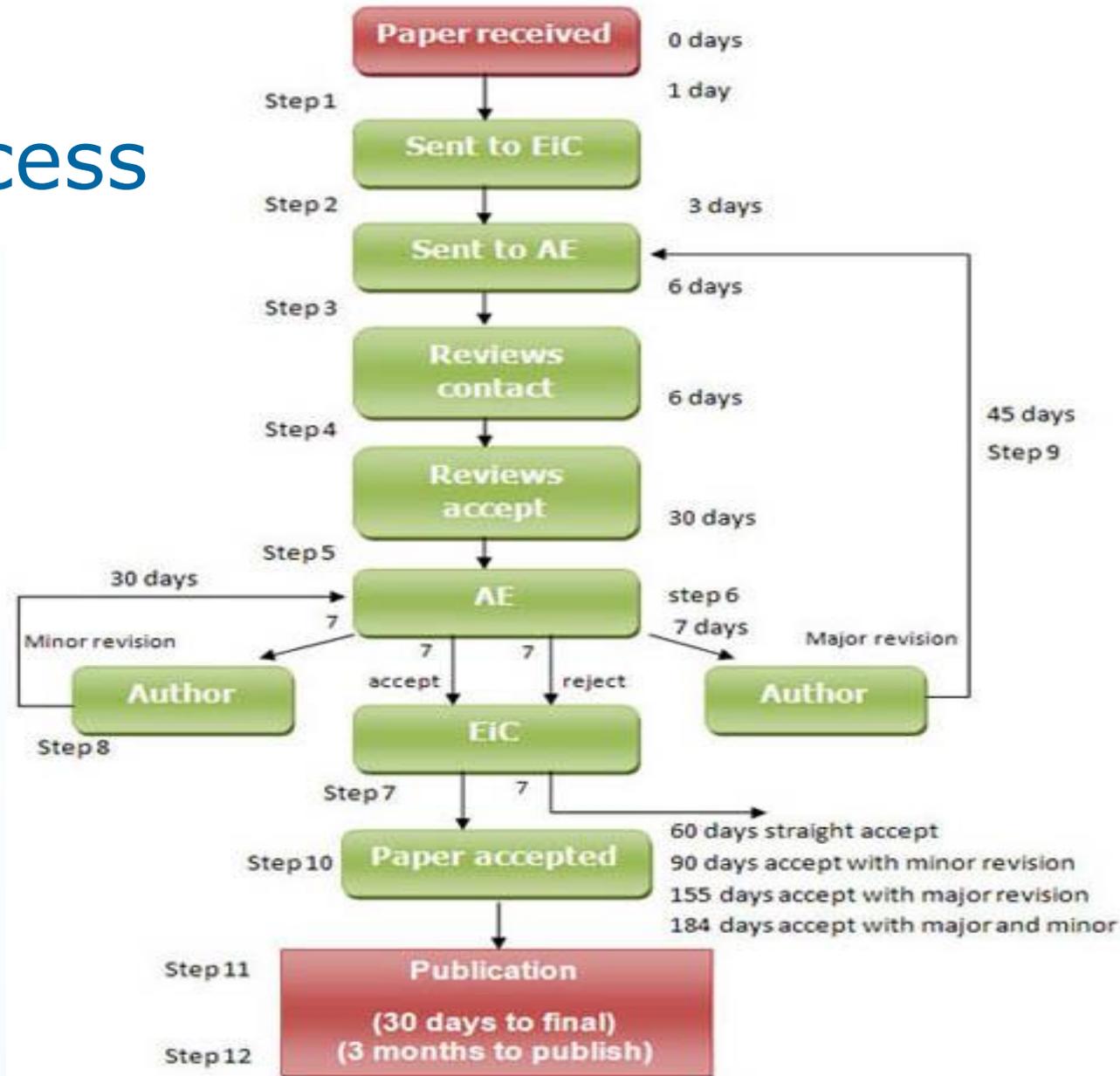
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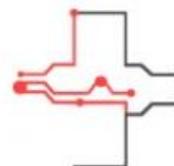


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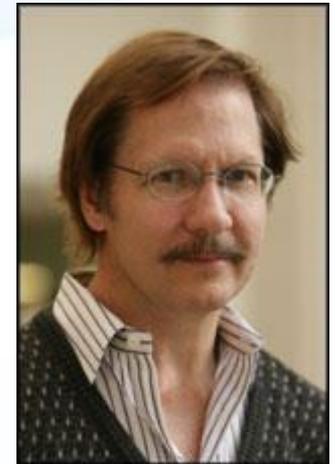
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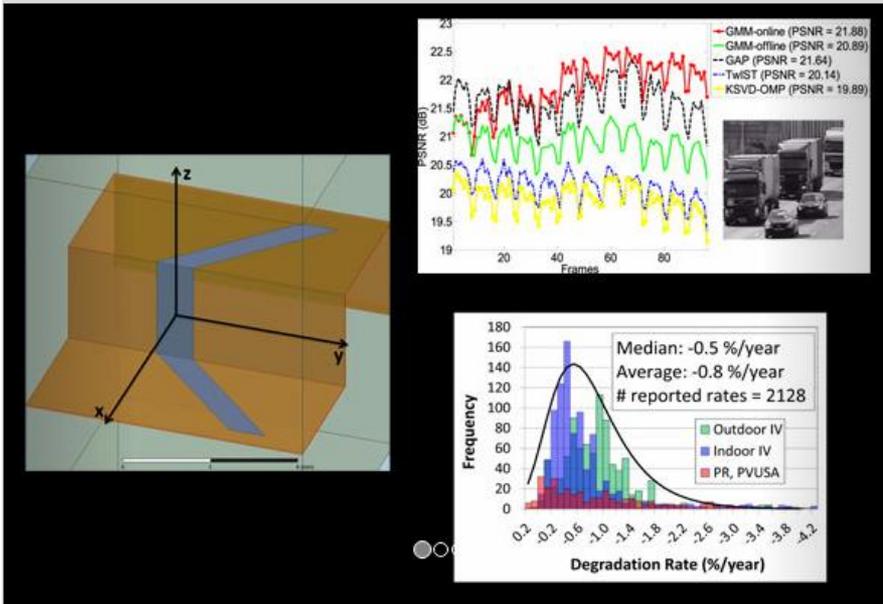


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