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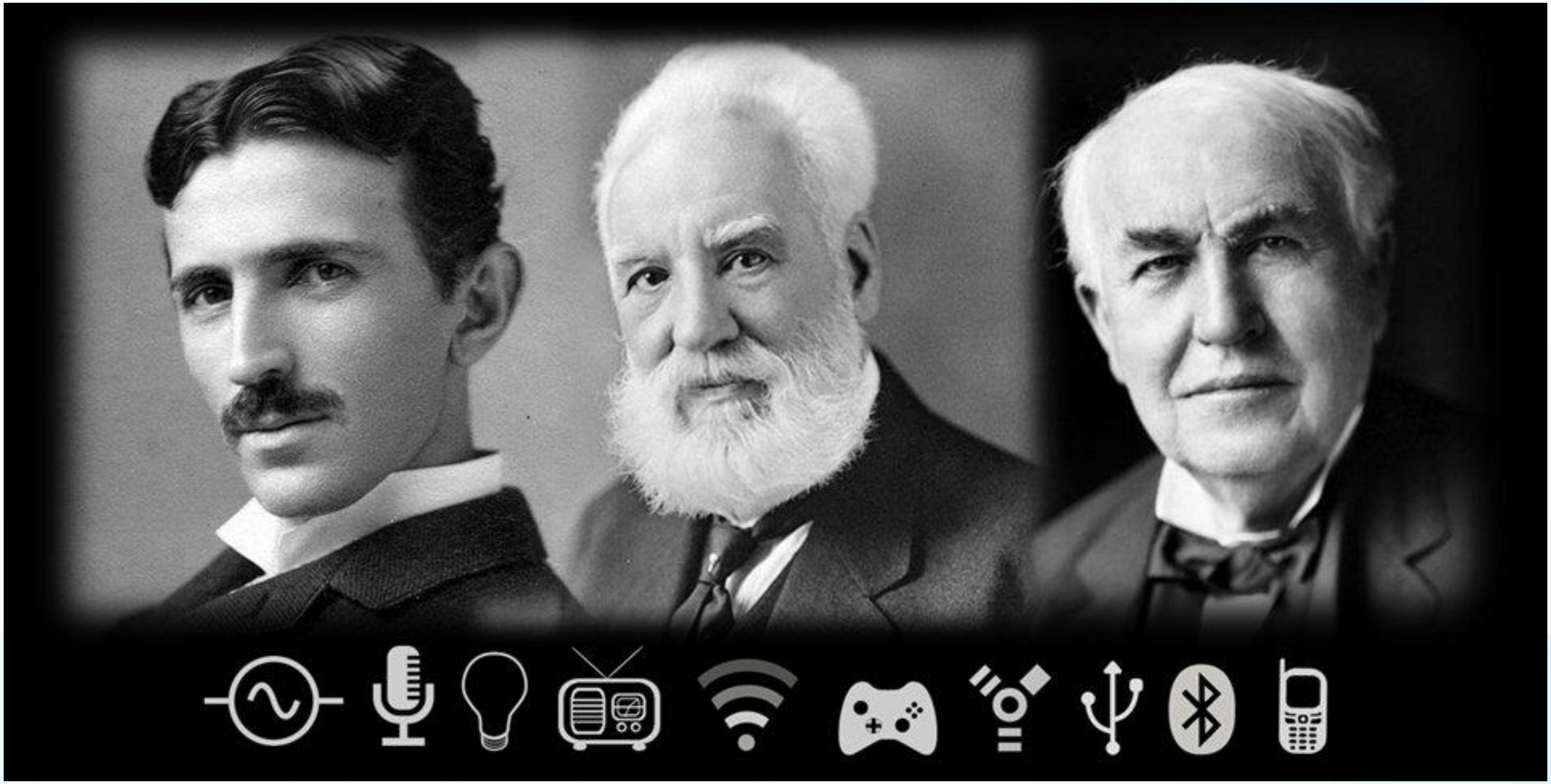

About the IEEE

- World's largest technical membership association with more than 430,000 members

umbai

- IEEE *Xplore* by the numbers:
  - Nearly 4 million total documents
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  - 15 year anniversary in 2015!

IEEE Day Contest Winner, Colombia

IEEE R8 Russia Siberia Section

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IEEE R8 RSS

Welcome

Institute of Electrical and Electronics Engineers (IEEE) Russia Siberia Section has been established on 13 February 2003. Section has the strong potential for membership growth through its big cities at Ural (in the order of population decreasing: Yekaterinburg, Chelyabinsk, Tyumen, etc.), Siberia (Novosibirsk, Omsk, Krasnoyarsk, Irkutsk, Barnaul, Novokuznetsk, Kemerovo, Tomsk, Ulan-Ude, Chita, etc.) and the Far-East (Vladivostok, Khabarovsk, etc.) Federal Districts of Russia.

IEEE R8 Russia Siberia Section in social media:

vk.com/ieeesiberia

linkedin.com/groups/8451907

Announcements

- **2017 Siberian Symposium on Data Science and Engineering (SSDSE)**

  12-13 Apr 2017 Technopark of Novosibirsk Akademgorodok, Russia

  Please see the following for more info: http://ssdse.ieeesiberia.org

  Topics

  ◦ Data Science ◦ Data Engineering ◦ Stream Data Analytics & the Internet of Things ◦ Internet Traffic Classification ◦ Machine Learning
  ◦ Artificial Intelligence ◦ General Artificial Intelligence ◦ Kernel functions
  ◦ Q-learning ◦ NLP with Deep Neural Networks ◦ Object Tracking ◦
  ◦ Face Recognition ◦ Demand Forecasting ◦ Mobile Deep Neural Networks ◦
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- История создания IEEE
- Как вступить в IEEE
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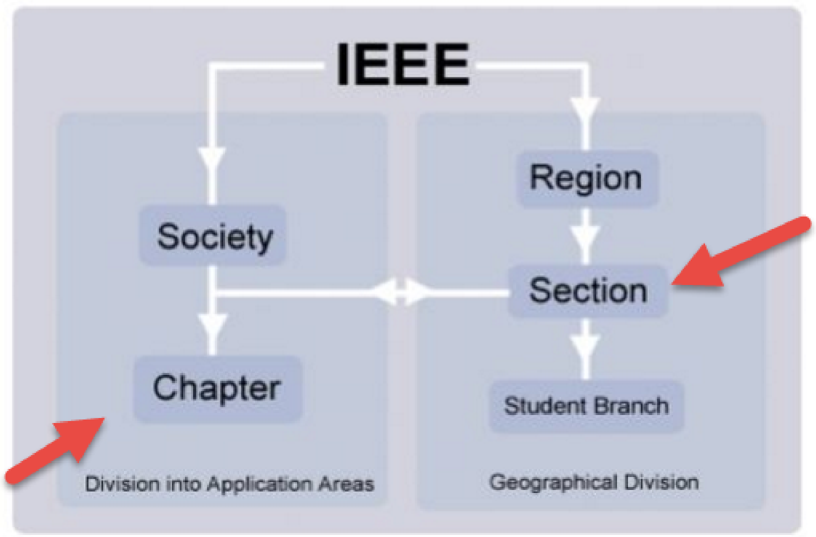
Институт инженеров по электротехнике и радиоэлектронике (IEEE)

Основанный в 1884 году в США, Институт IEEE объединяет специалистов в области радиоэлектроники и смежных областей, являясь общественной профессиональной организацией. IEEE имеет всемирный статус, а членство в IEEE территориально не ограничивается. В настоящее время в IEEE состоит более 410 000 человек из 150 стран – это самое большое всемирное техническое профессиональное общество учёных и исследователей.



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IEEE организационно содержит две структуры - географическую и техническую. Географически IEEE подразделяется на:

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- Регионы (более чем 4 секции)

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Thomson Reuters Journal Citation Reports® by Impact Factor

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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

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3 of the top 5 journals in Automation & Control Systems

3 of the top 5 journals in Artificial Intelligence

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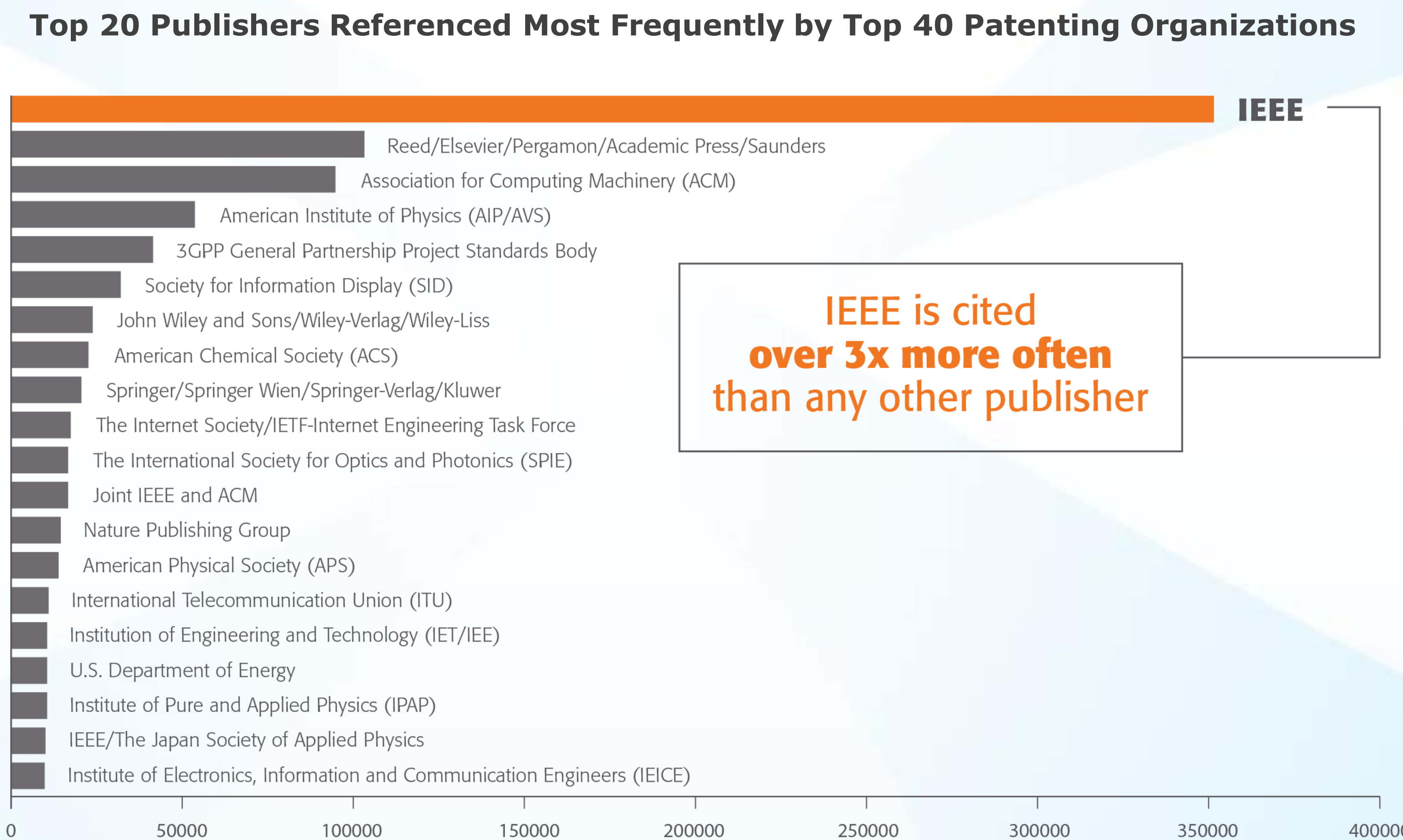
- **Bell Labs Technical Journal** (BLTJ) back to 1922
- Backfile to 1988, select legacy data back to 1872
- Inspec index records for all articles

IEEE and Patents

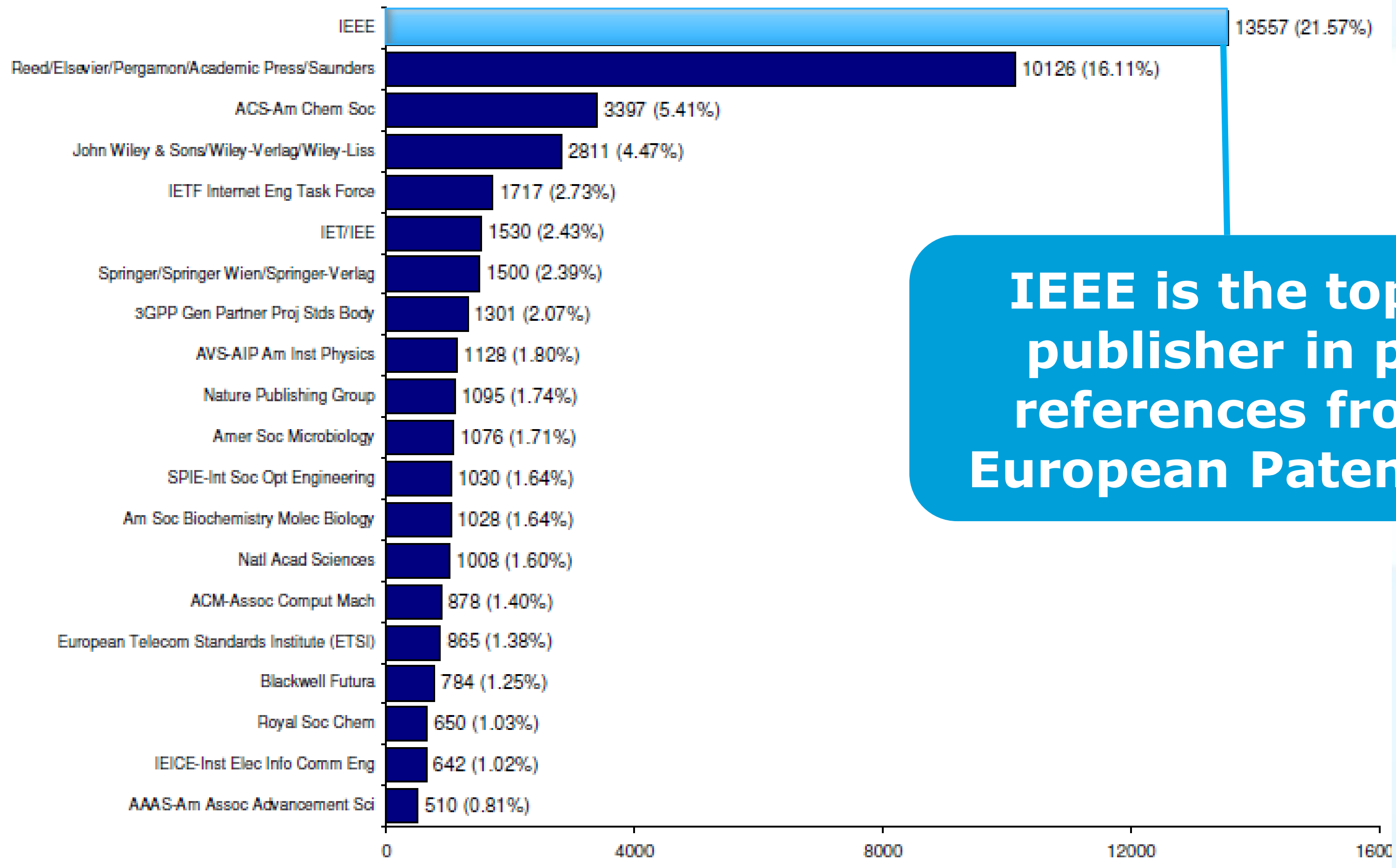
IEEE Leads US Patent Citations



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

Battery	Computer hardware	Computer software
Information storage	Measuring, testing, and control	Medical devices
Nuclear and X-ray	Optics	Power systems
Robotics	Semiconductors	Smart Grid
Solar/Photovoltaic	Telecommunications	Wind Energy

Source: 1790 Analytics LLC 2015

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- IEEE Circuits and Systems Society
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- 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
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- IEEE Microwave Theory and Techniques Society
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- 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
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SIGNAL PROCESSING AEROSPACE
COMMUNICATIONS HUMAN-CENTERED INFORMATICS
BIOMEDICAL ENGINEERING ELECTRONICS
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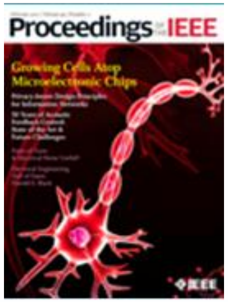
CYBER SECURITY ELECTROMAGNETICS

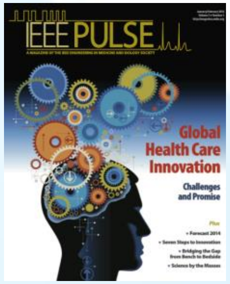
IEEE

Multidisciplinary Content on IEEE Xplore Digital Library

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.**





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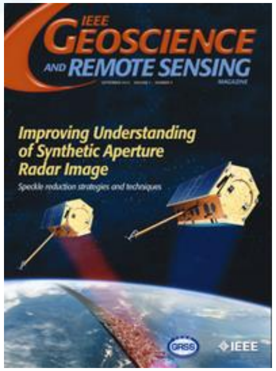
Geoscience and related fields

- 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)**

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Manufacturing Engineering

- IEEE's publications cover manufacturing practices and technologies, including **the development of systems, processes, machines, and tools**.

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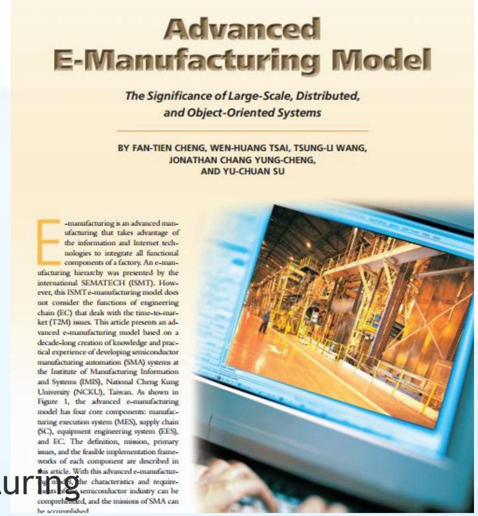
- Relevant IEEE publications include:
  - IEEE/ASME Transactions on Mechatronics (#1 most cited journal in Engineering – Manufacturing)
  - IEEE Transactions on Components, Packaging and Manufacturing Technology
  - IEEE Transactions on Semiconductor Manufacturing
  - IEEE Transactions on Automation 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



Advanced E-Manufacturing Model

The Significance of Large-Scale, Distributed, and Object-Oriented Systems

BY FAN-TIEN CHENG, WEN-HUANG TSAI, TSUNG-LI WANG, JONATHAN CHANG YUNG-CHENG, AND YU-CHUAN SU

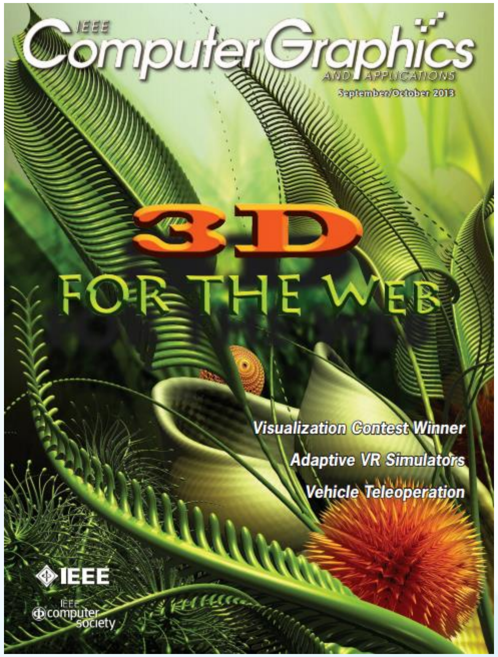
E-manufacturing is an advanced manufacturing that takes advantage of the information and Internet technologies to integrate all functional components of a factory. An e-manufacturing hierarchy was presented by the international SEMATECH (ISMT). However, this ISMT e-manufacturing model does not consider the functions of engineering chain (EC) that deals with the time-to-market (T2M) issues. This article presents an advanced e-manufacturing model based on a decade-long creation of knowledge and practical experience of developing semiconductor manufacturing automation (SMA) systems at the Institute of Manufacturing Information and Systems (IMIS), National Cheng Kung University (NCKU), Taiwan. As shown in Figure 1, the advanced e-manufacturing model has four core components: manufacturing execution system (MES), supply chain (SC), equipment engineering system (EES), and EC. The definition, mission, primary issues, and the feasible implementation frameworks of each component are described in this article. With this advanced e-manufacturing model, the characteristics and requirements of the semiconductor industry can be comprehended, and the missions of SMA can be accomplished.

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



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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

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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

PATIENT-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, i[illegible] 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 nonintrusive, 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 [illegible] the authors explore how the rhythmogram can be used

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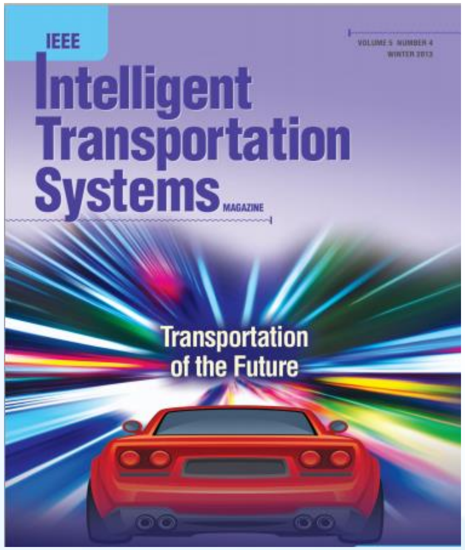
  - IEEE International Conference on Automation and Logistics



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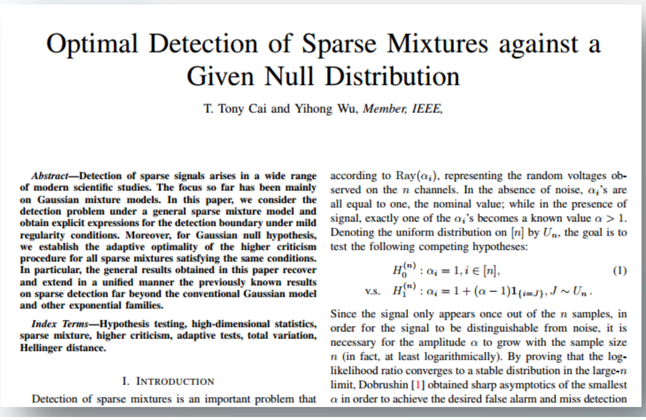
Prof. Clayton Christensen

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(α_i), representing the random voltages observed on the n channels. In the absence of noise, α_i's are all equal to one, the nominal value; while in the presence of signal, exactly one of the α_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:

$$H_0^{(n)} : \alpha_i = 1, i \in [n], \quad (1)$$
$$\text{v.s.} \quad H_1^{(n)} : \alpha_i = 1 + (\alpha - 1)\mathbf{1}_{\{i=J\}}, J \sim U_n\,.$$

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 α 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 α in order to achieve the desired false alarm and miss detection

Prof. Tony Cai

The Wharton School of the University of Pennsylvania

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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

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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

Abstract

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

In this talk, I hope…
Disney. In particul…
distilled from Disne…

As examples of cha…
I discuss two newer…
the Disney theme…
developed in conju…
and has made app…

Ray Tracing for the Movie 'Cars'

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

Pixar Animation Studios

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 …

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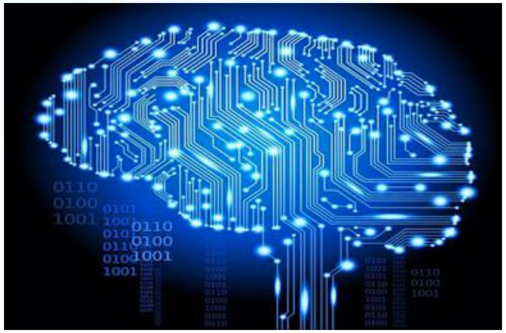
In 2017, IEEE will introduce six new journals that will be available for subscription:



- *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***

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IEEE

New IEEE Journals Coming in 2016

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

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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

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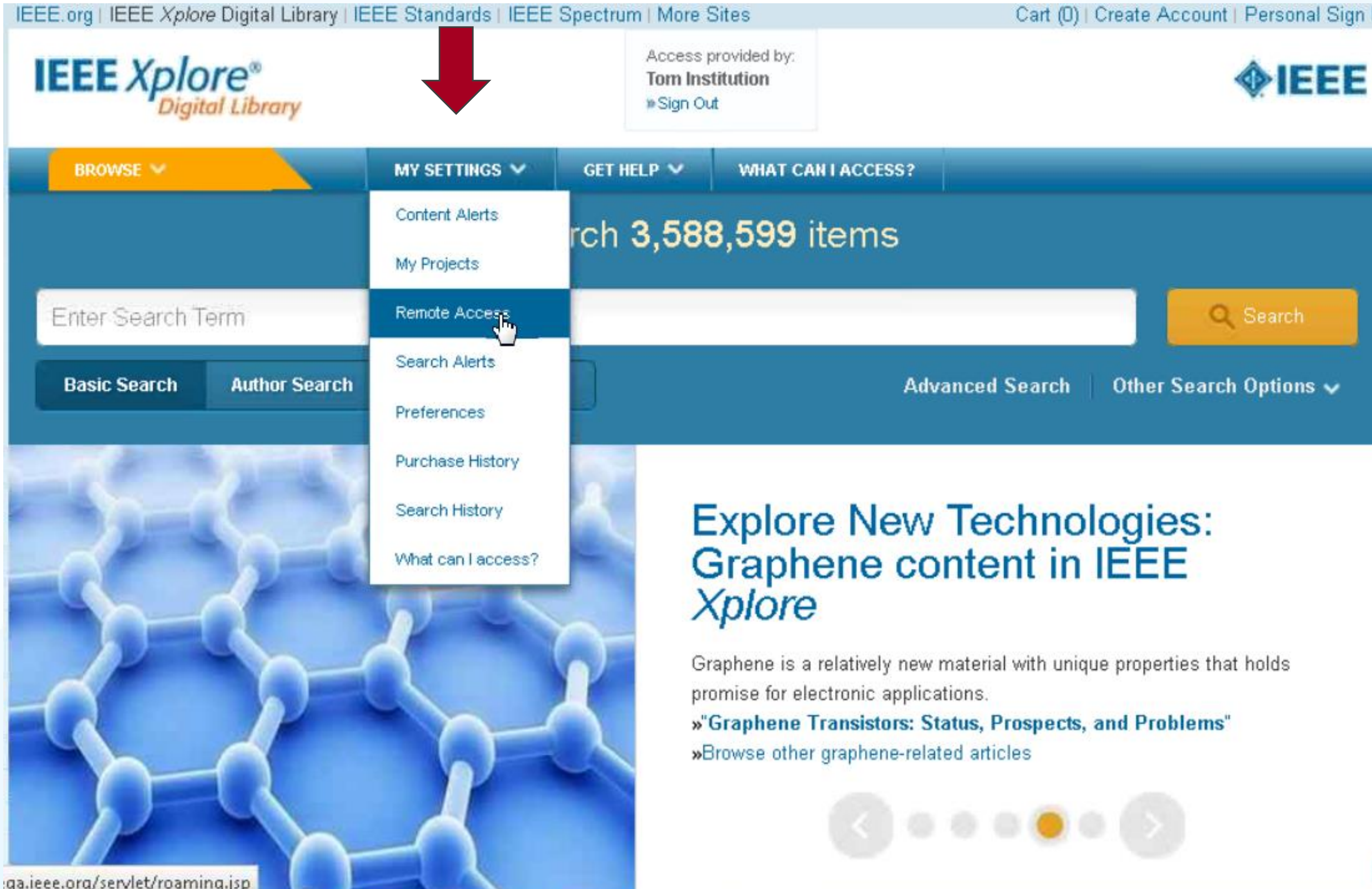

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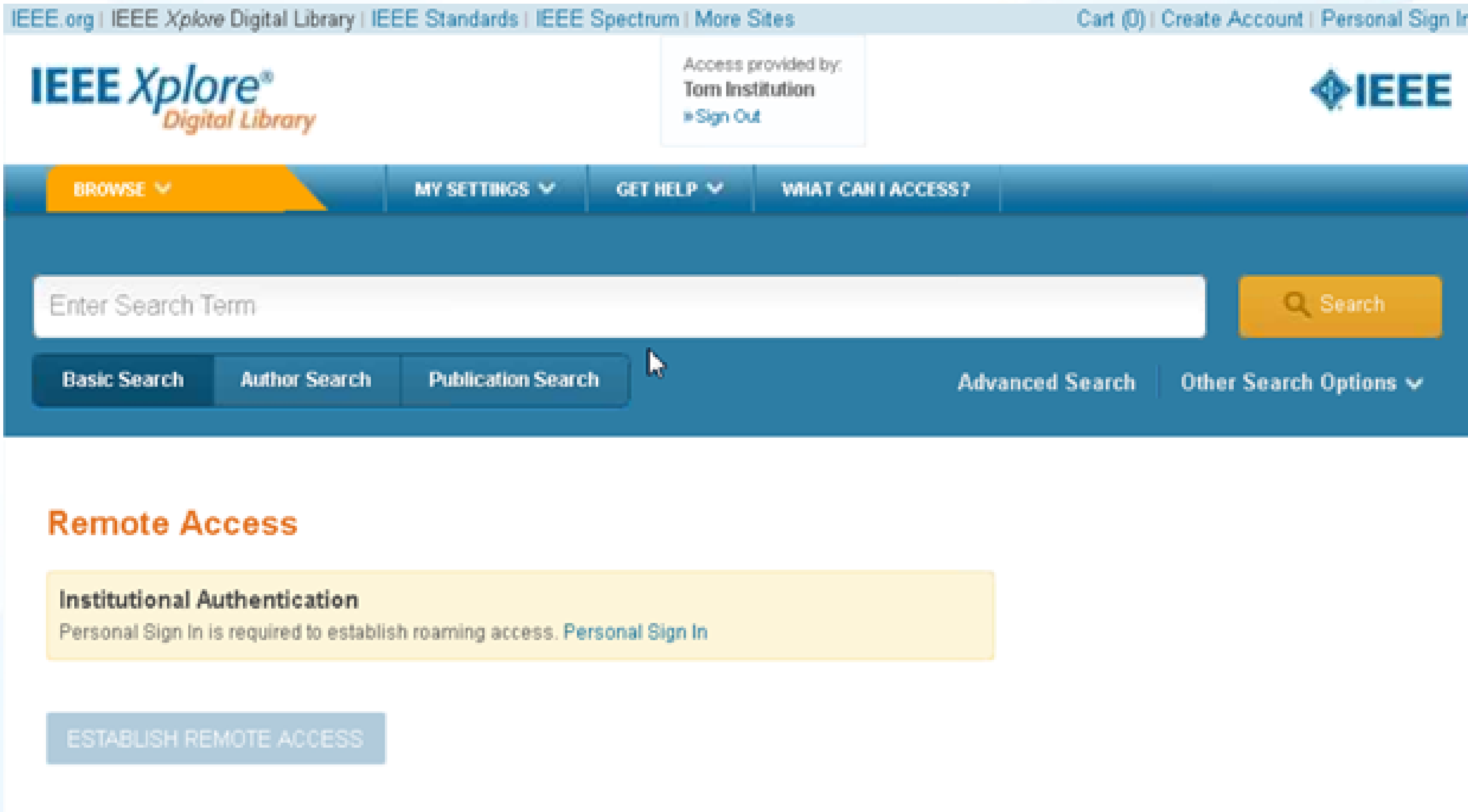
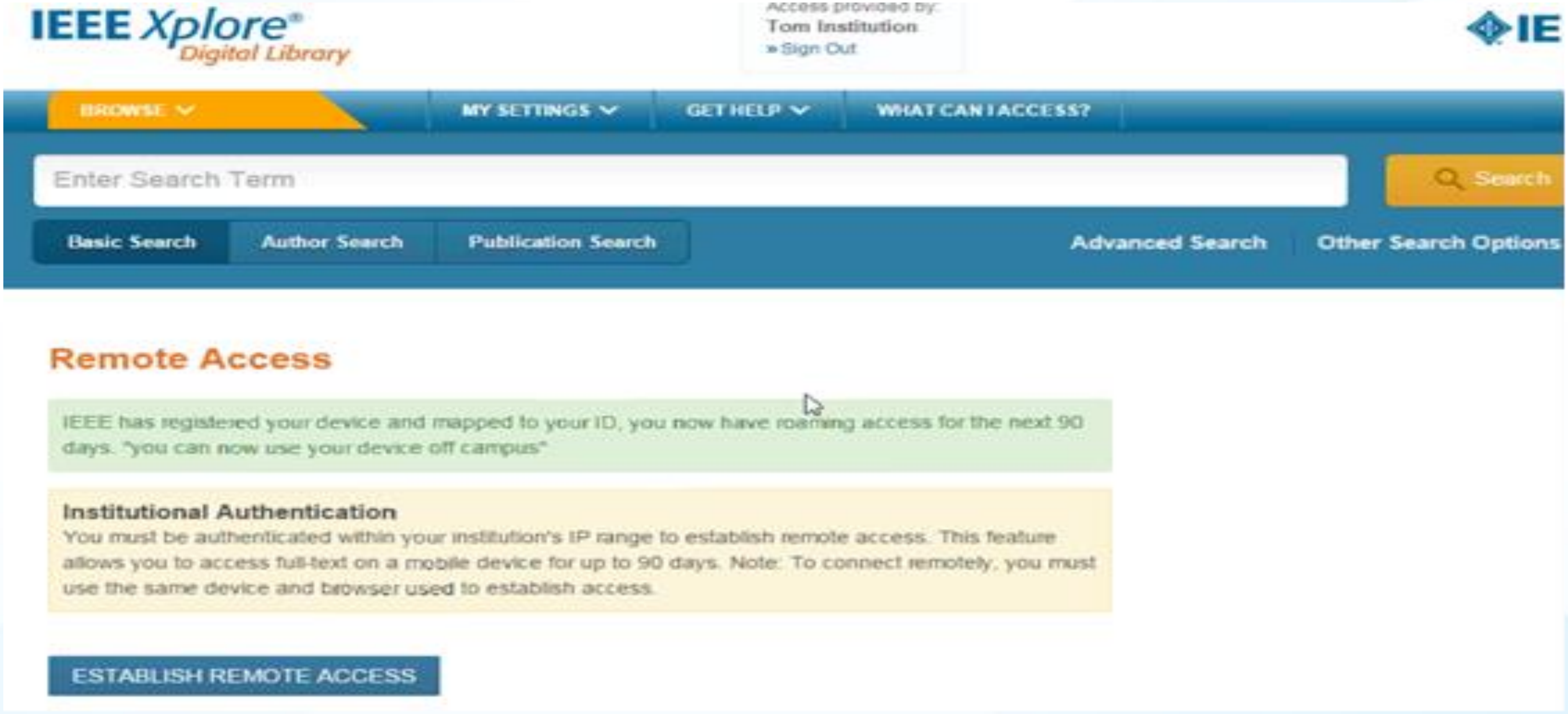


Roaming Mobile Access – Select Establish Remote Access to pair mobile device:



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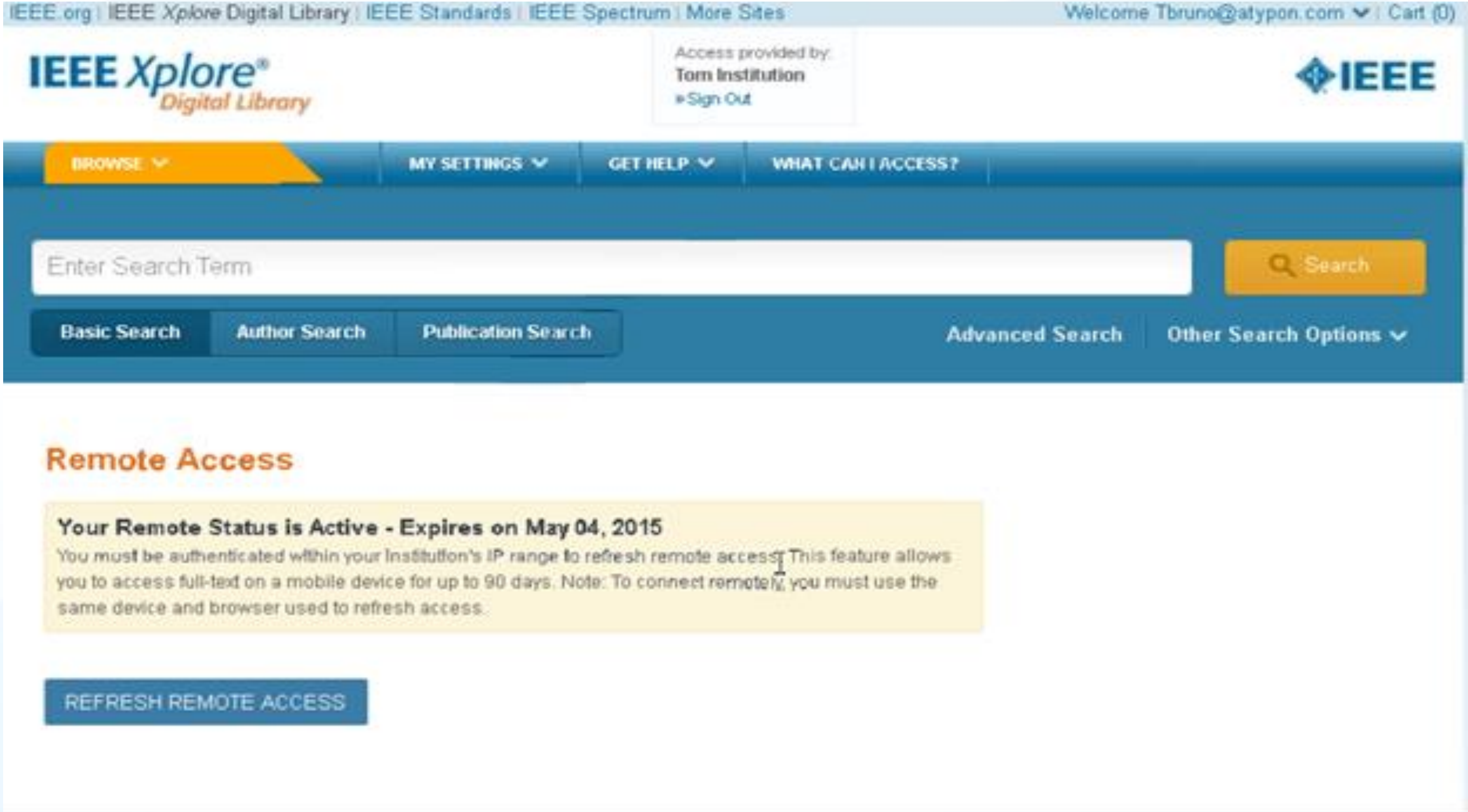

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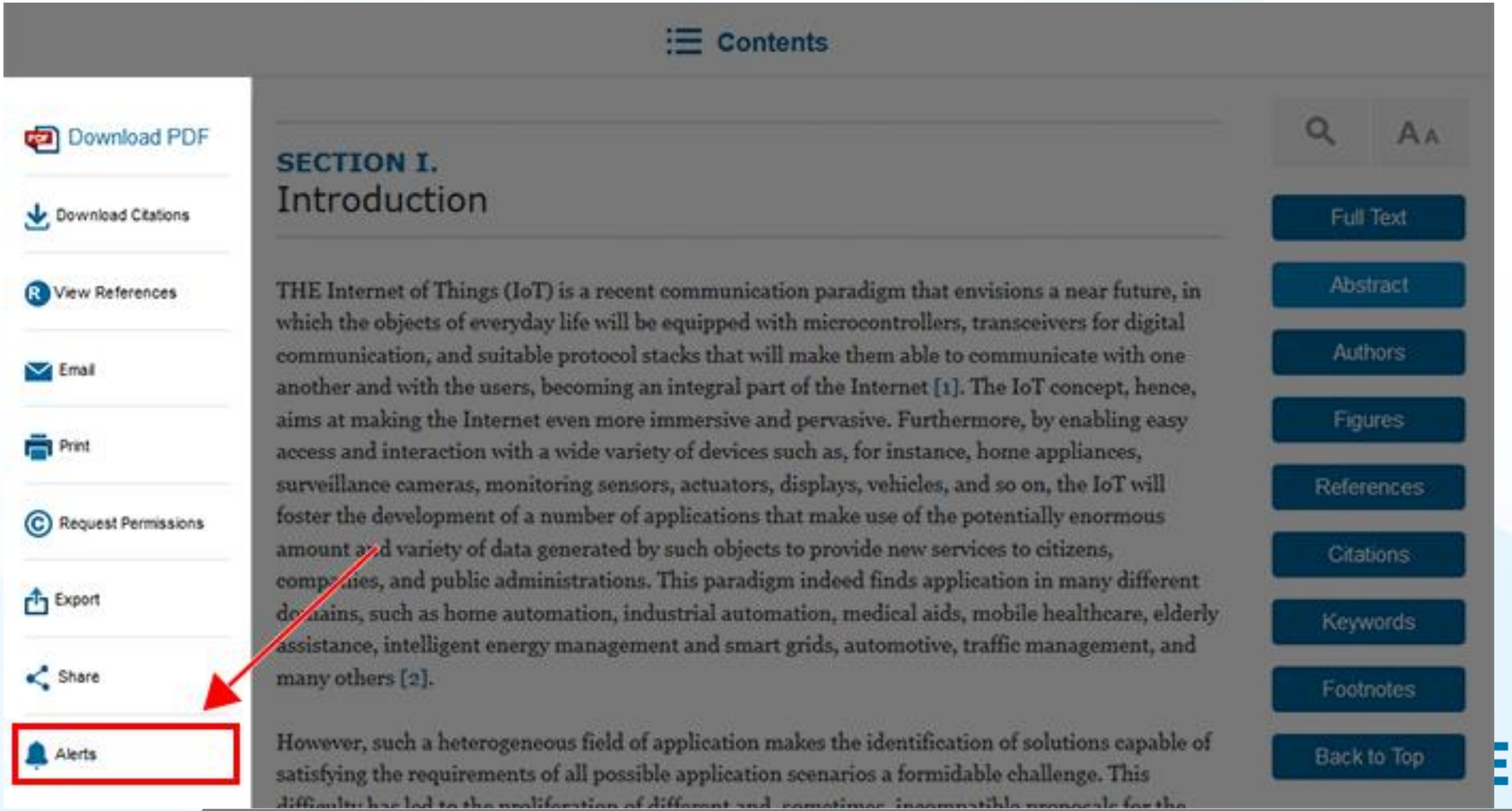

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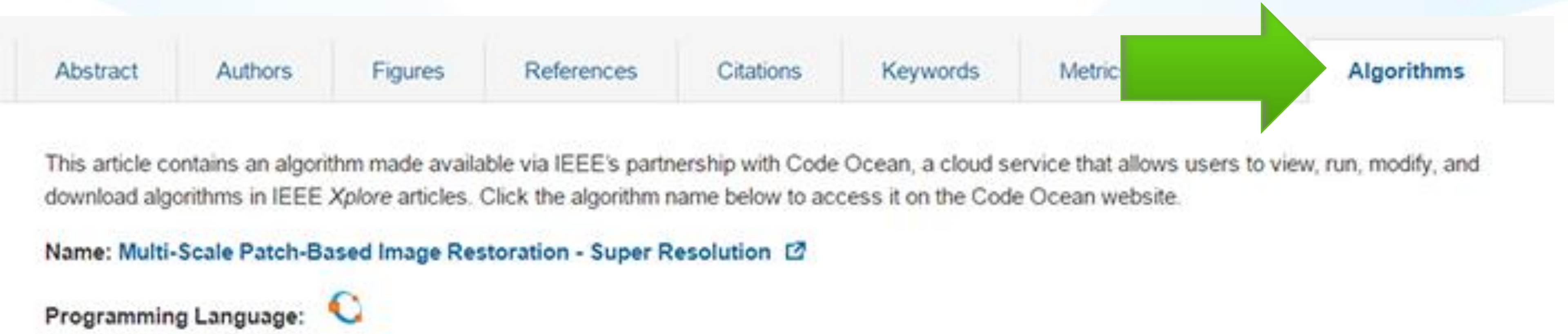

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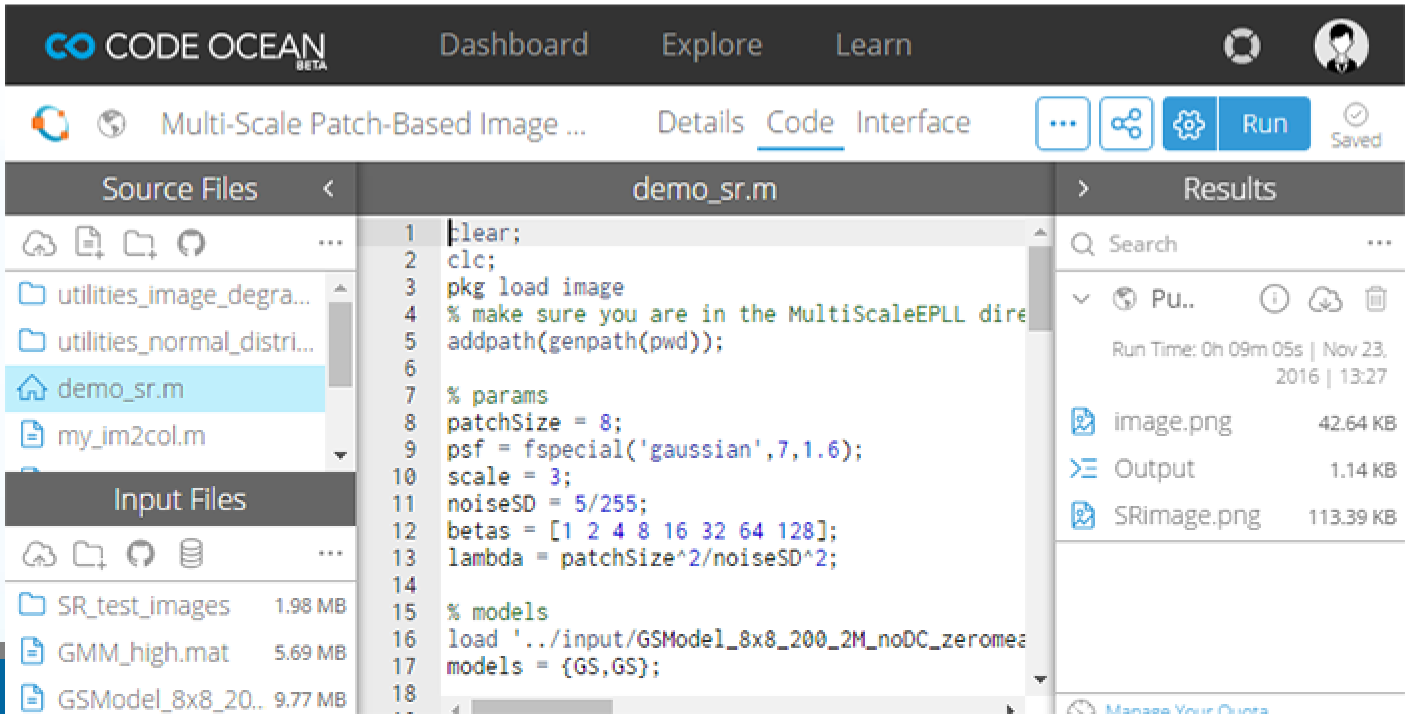

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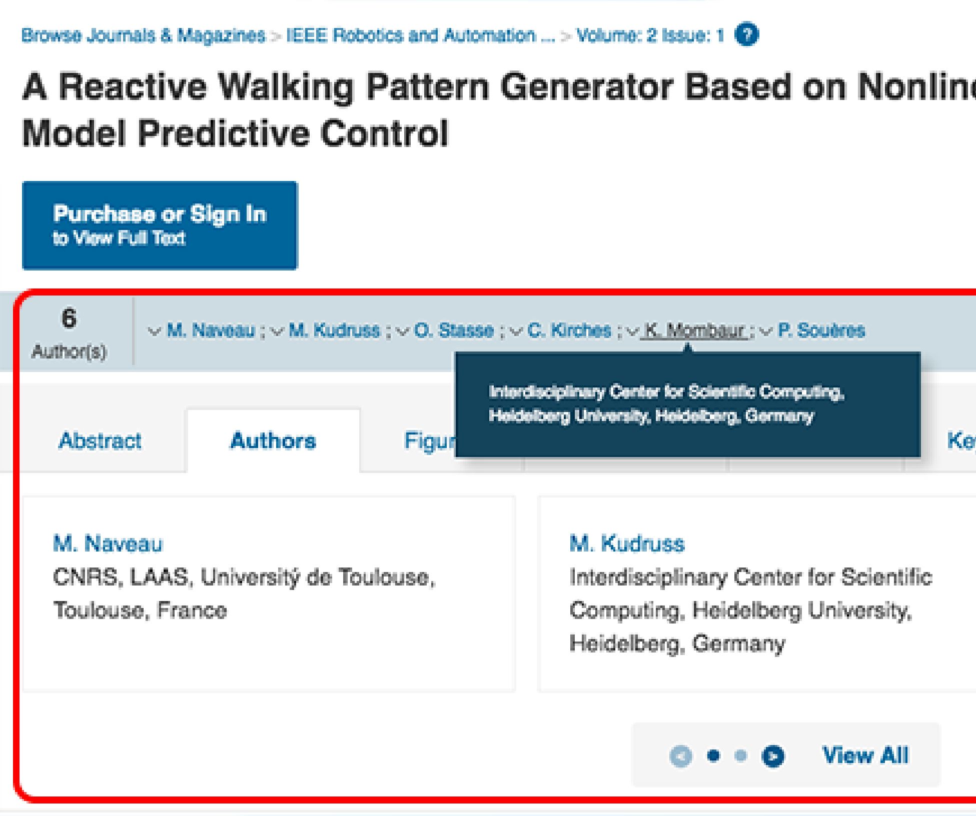

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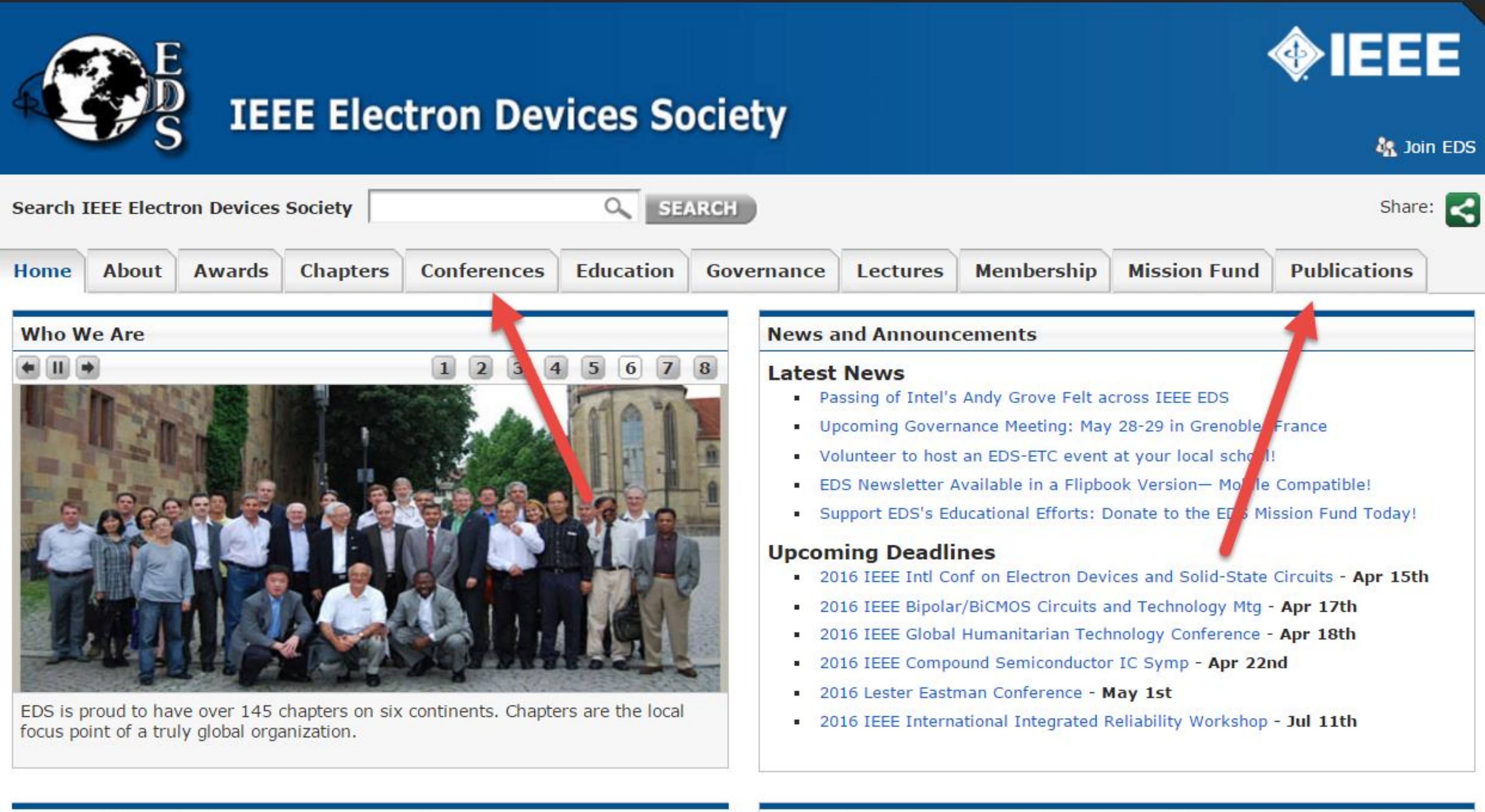
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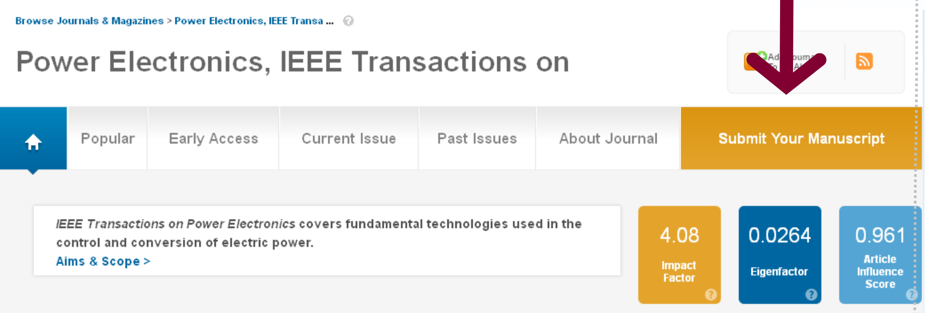

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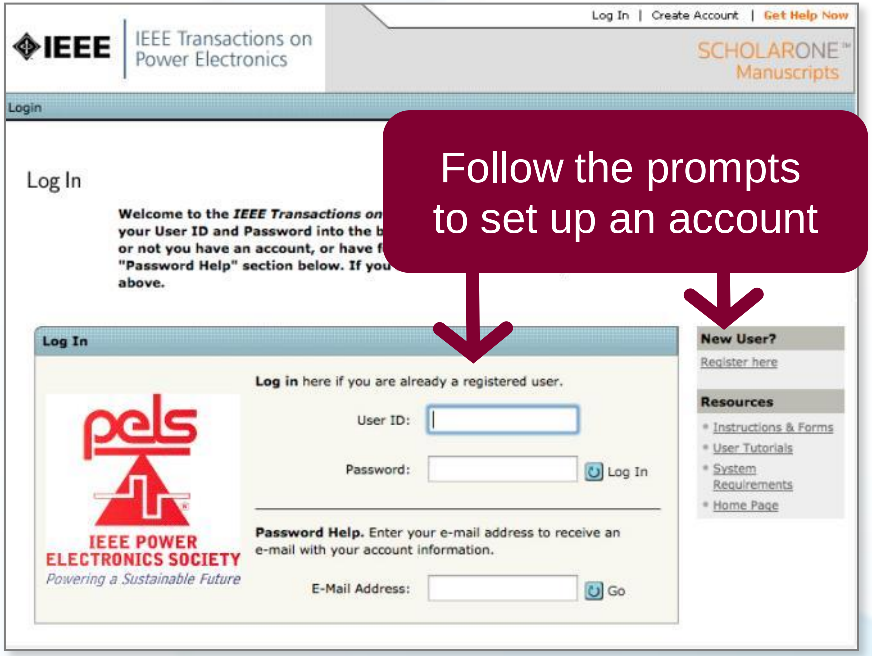

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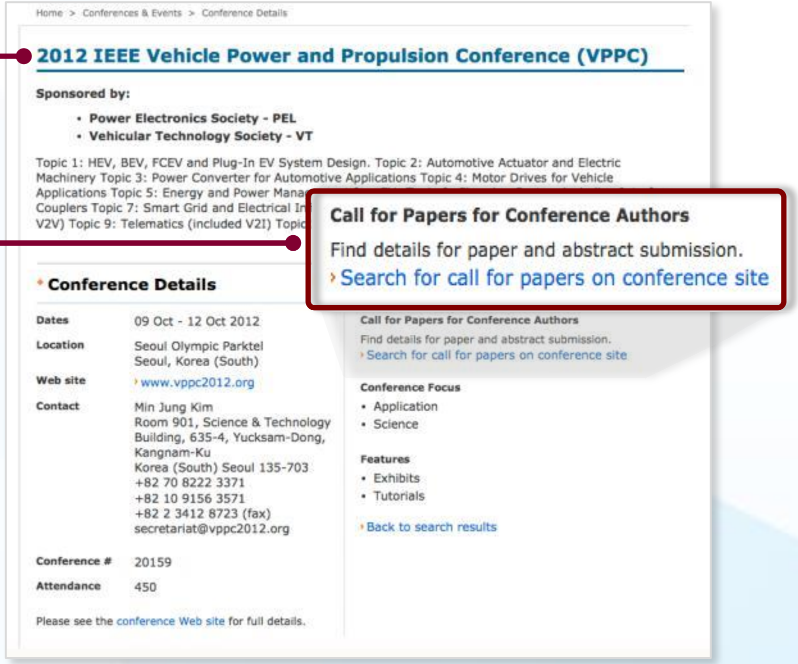

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- Title
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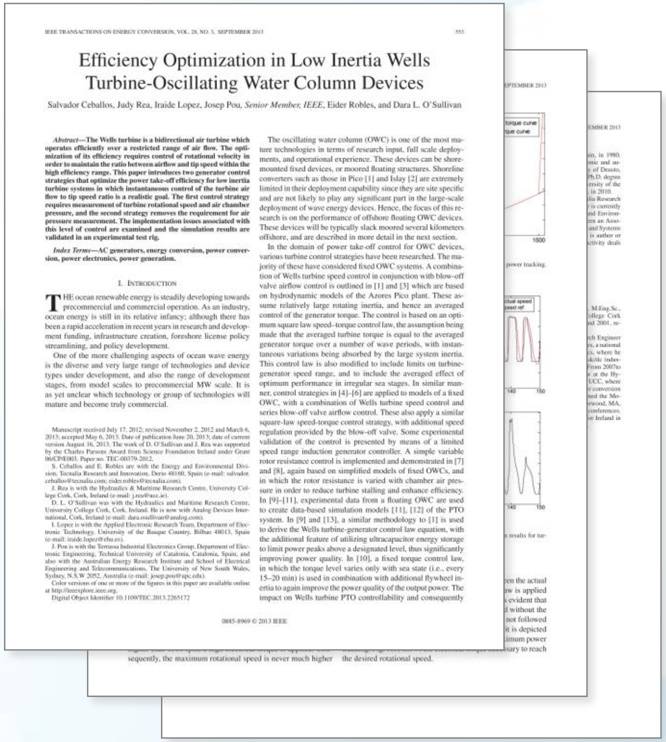
- Results/Discussions/Findings
- Conclusion
- References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Paper Structure

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    - 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

Why you did

What you did

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

Why they’re useful & important & move the field forward

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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.

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No actual results, only describes the organization of the paper

Paper Structure

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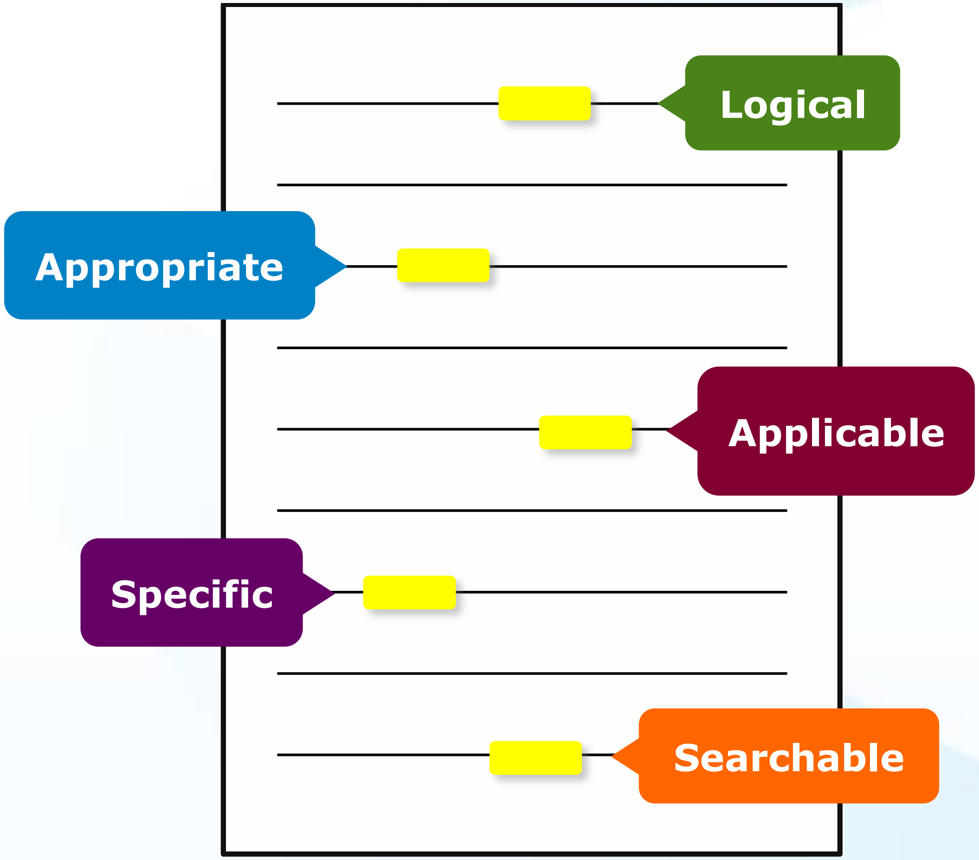

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Bit rate, Decoding, Encoding, Parallel processing, Video coding

Authors Keywords

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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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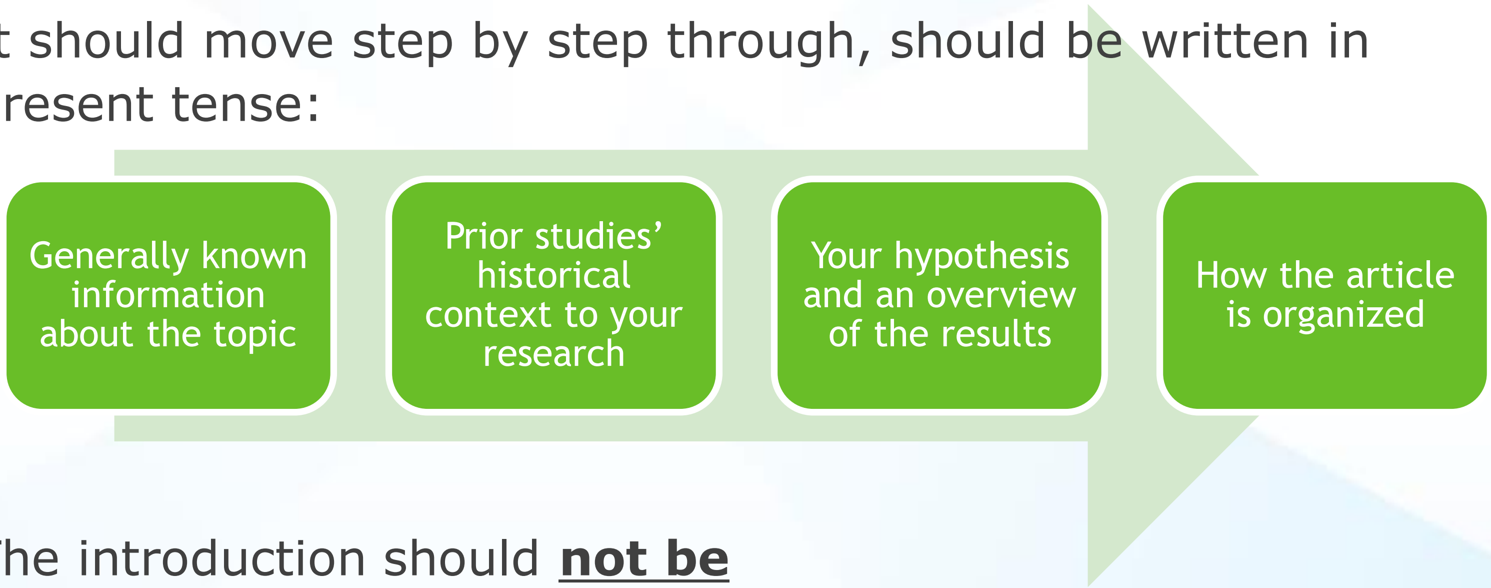

- The introduction should **not be**
  - Too broad or vague
  - More then 2 pages

Paper Structure

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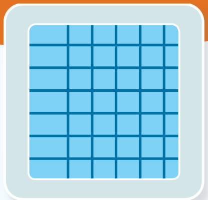
Present representative data or when exact values are important to show



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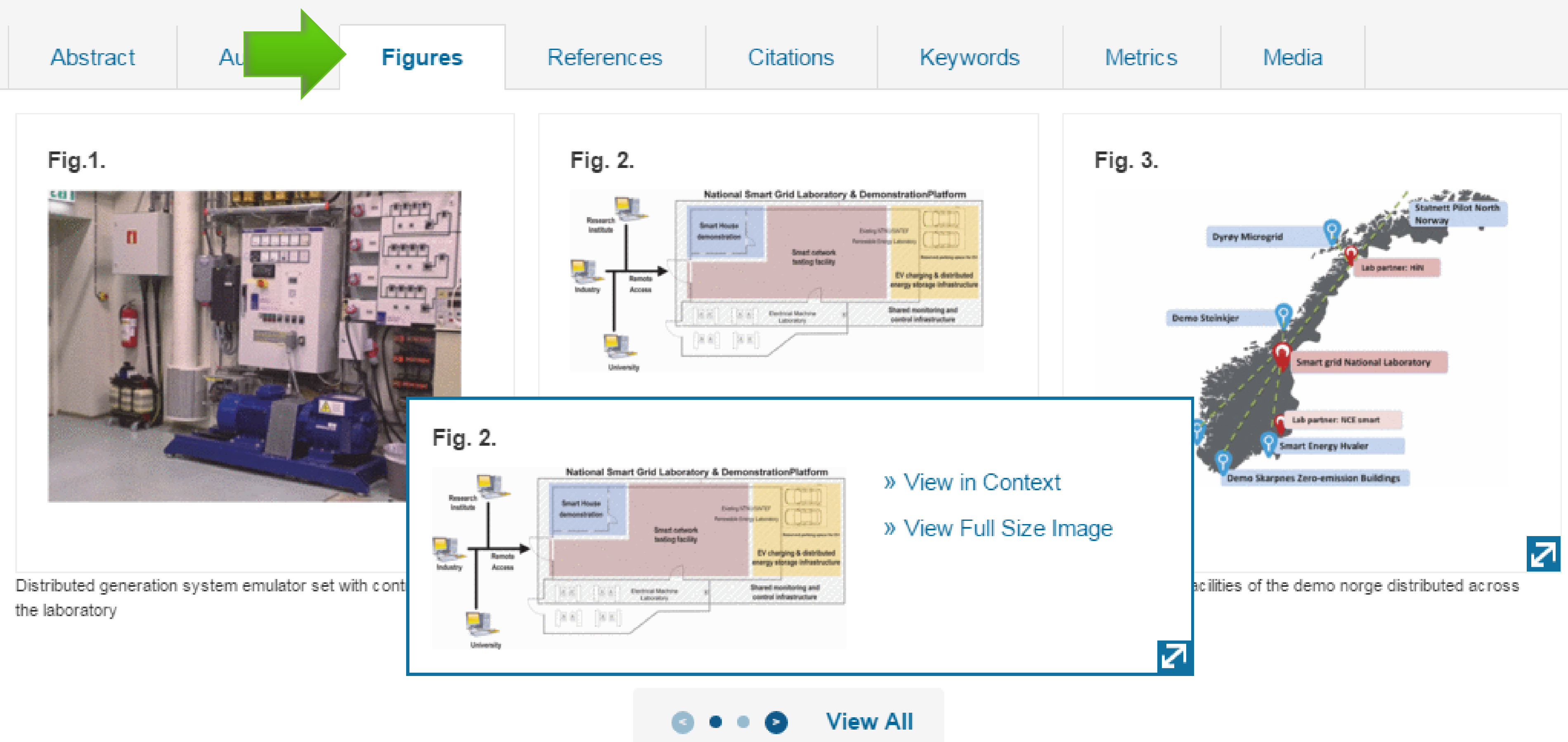

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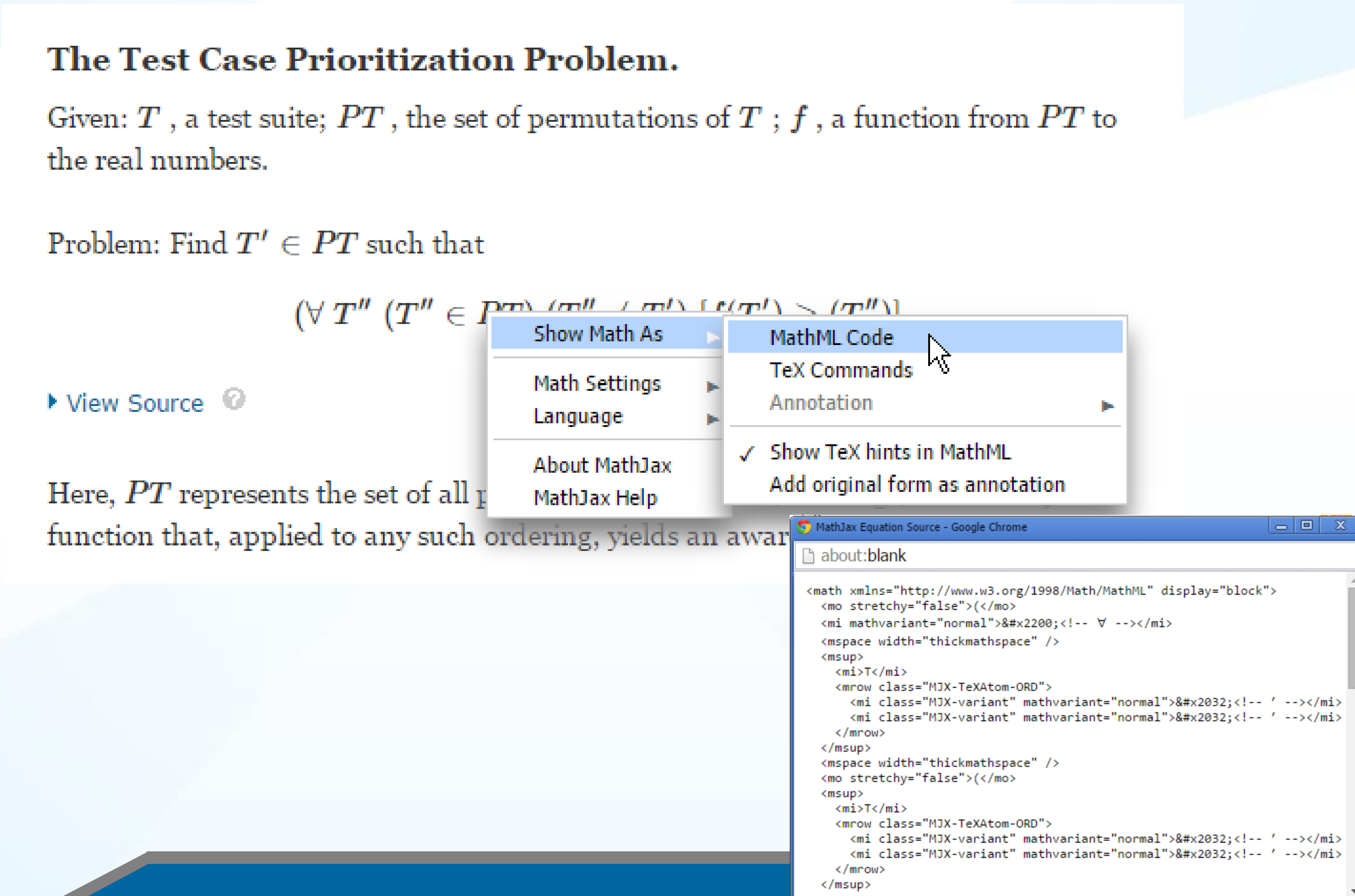

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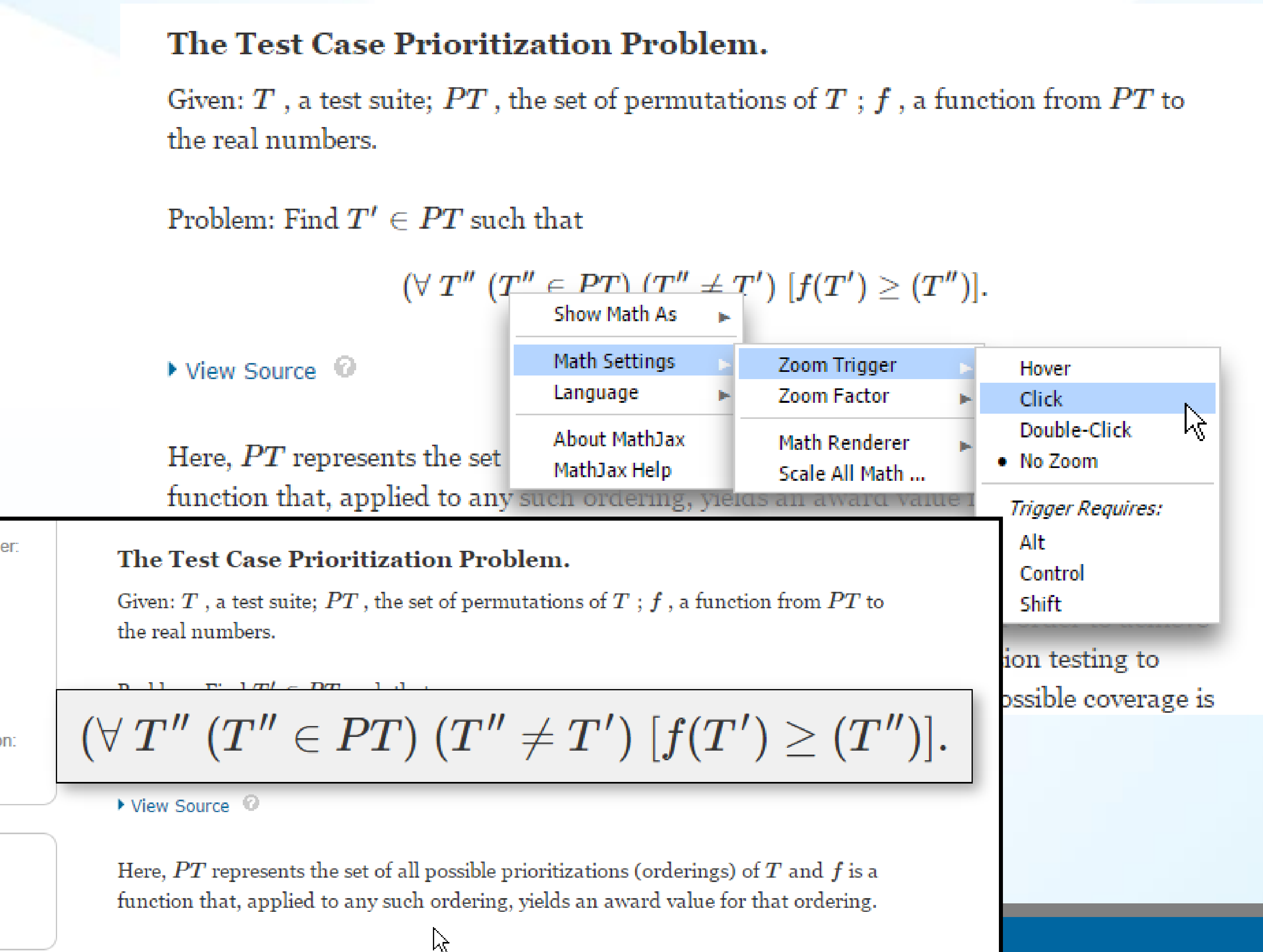

Paper Structure

Results/discussion

Demonstrate that you solved the problem or made significant advances

Results: Summarized Data

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

Discussion: Interprets the Results

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

Paper Structure

Conclusion

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

Paper Structure

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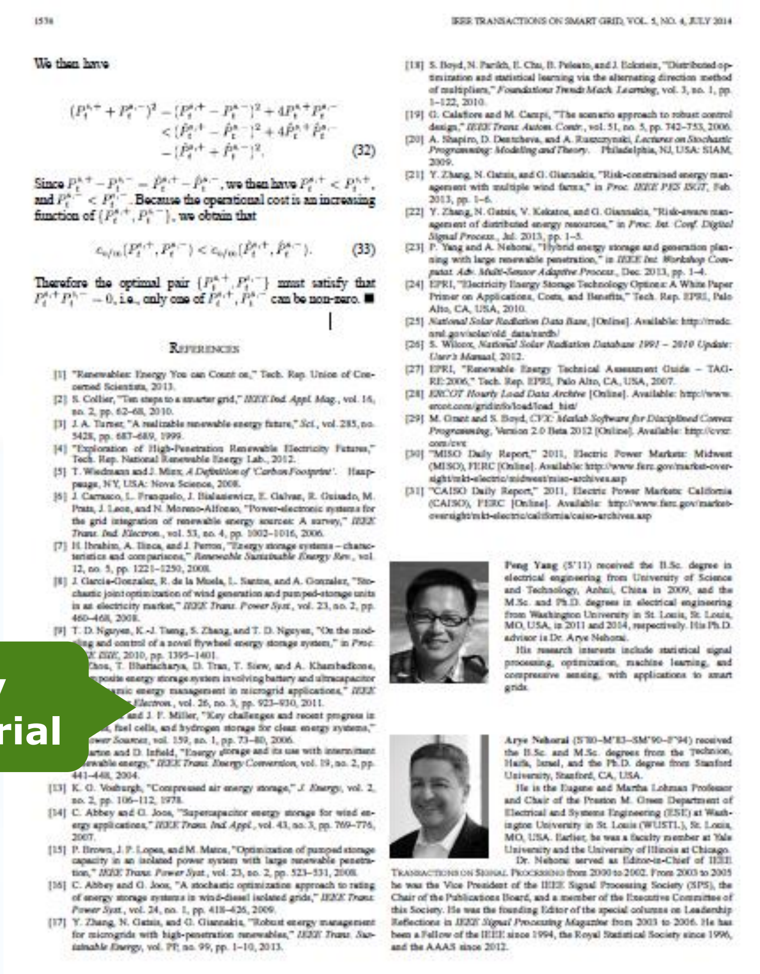

We then have

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

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

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

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

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

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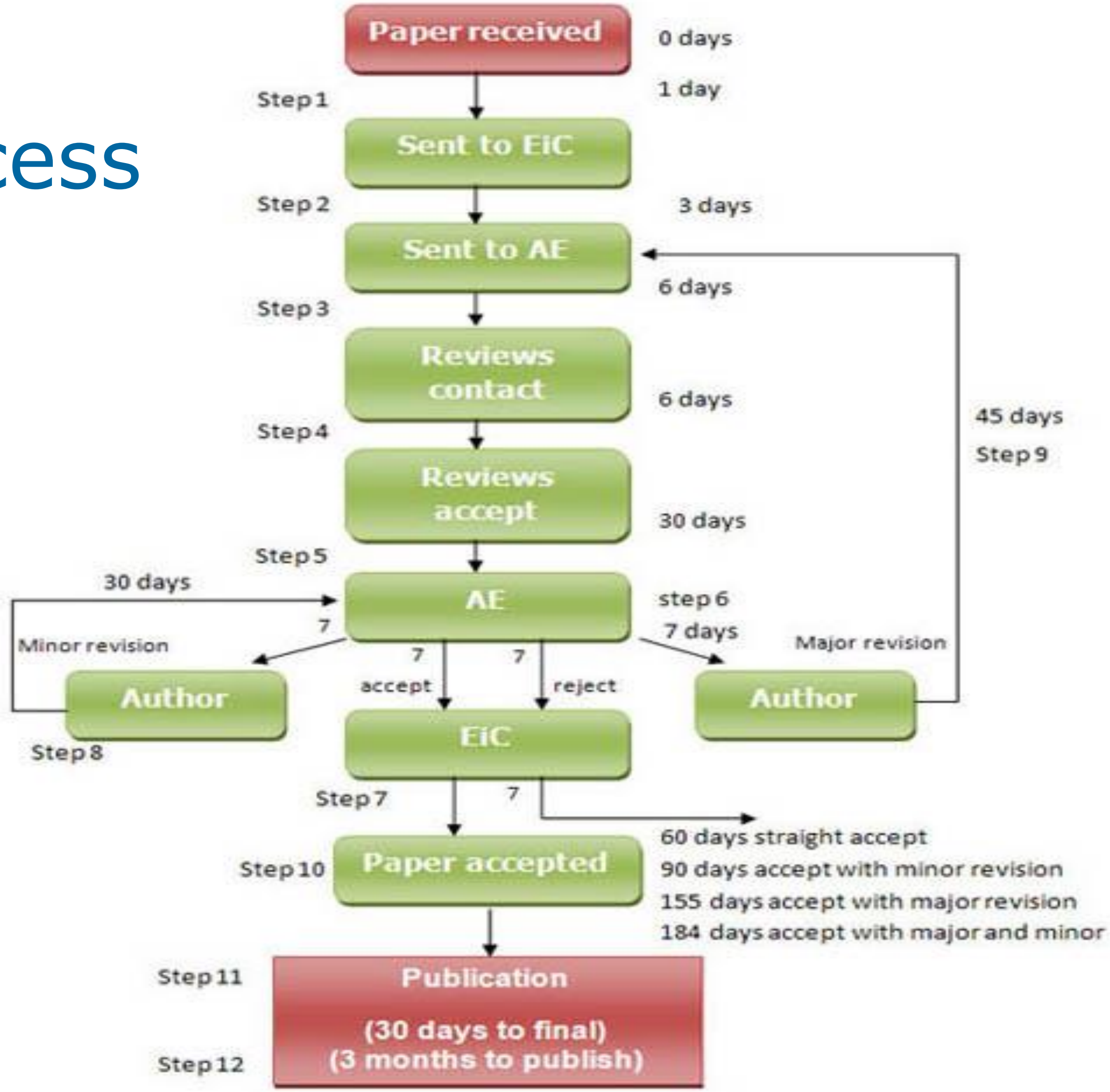

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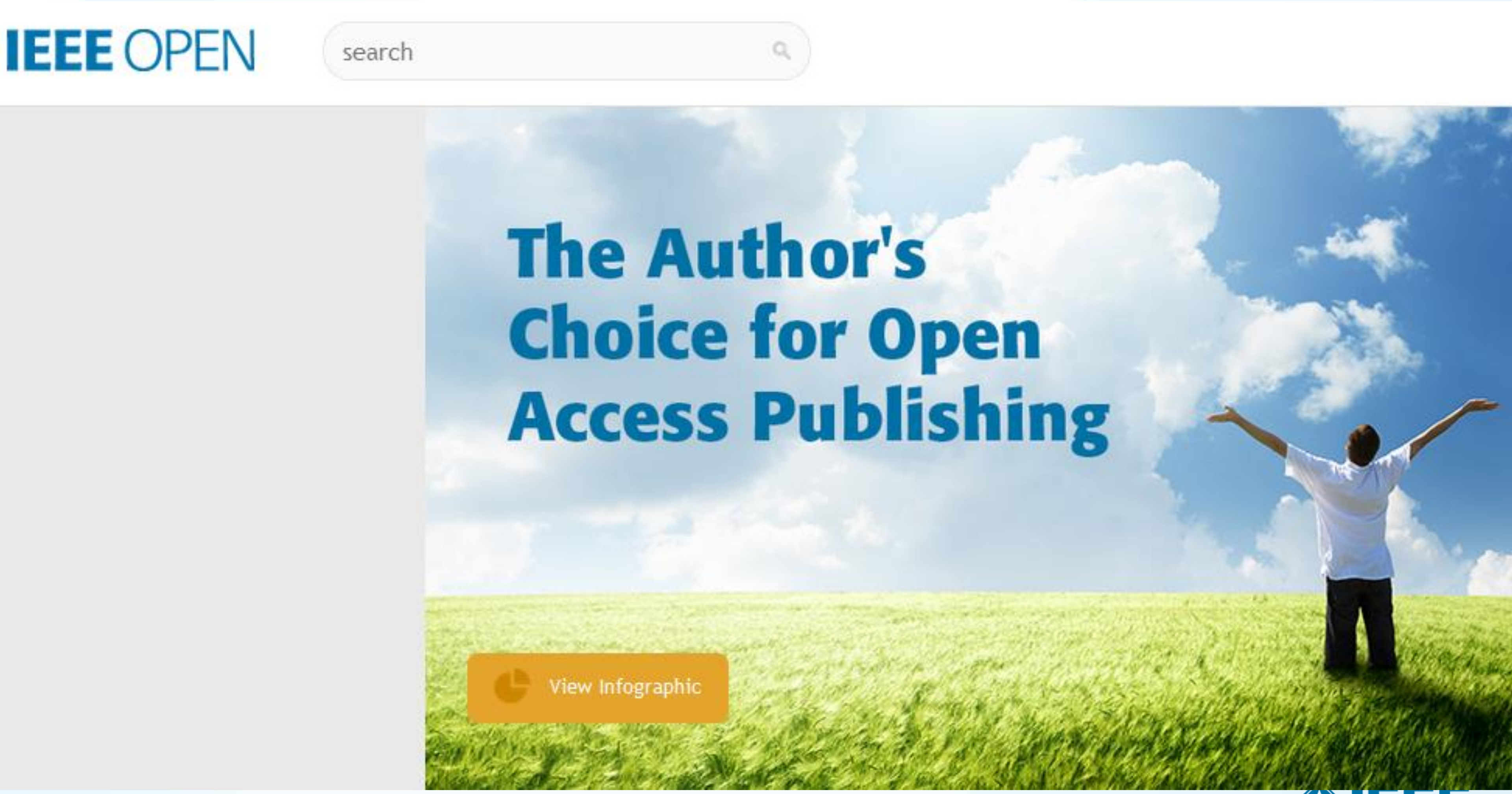

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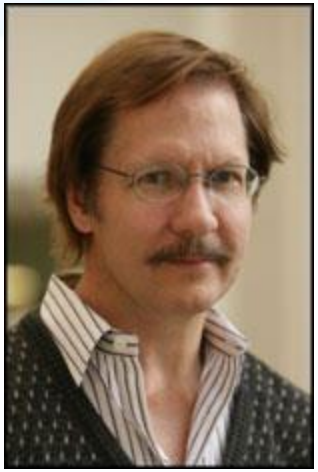

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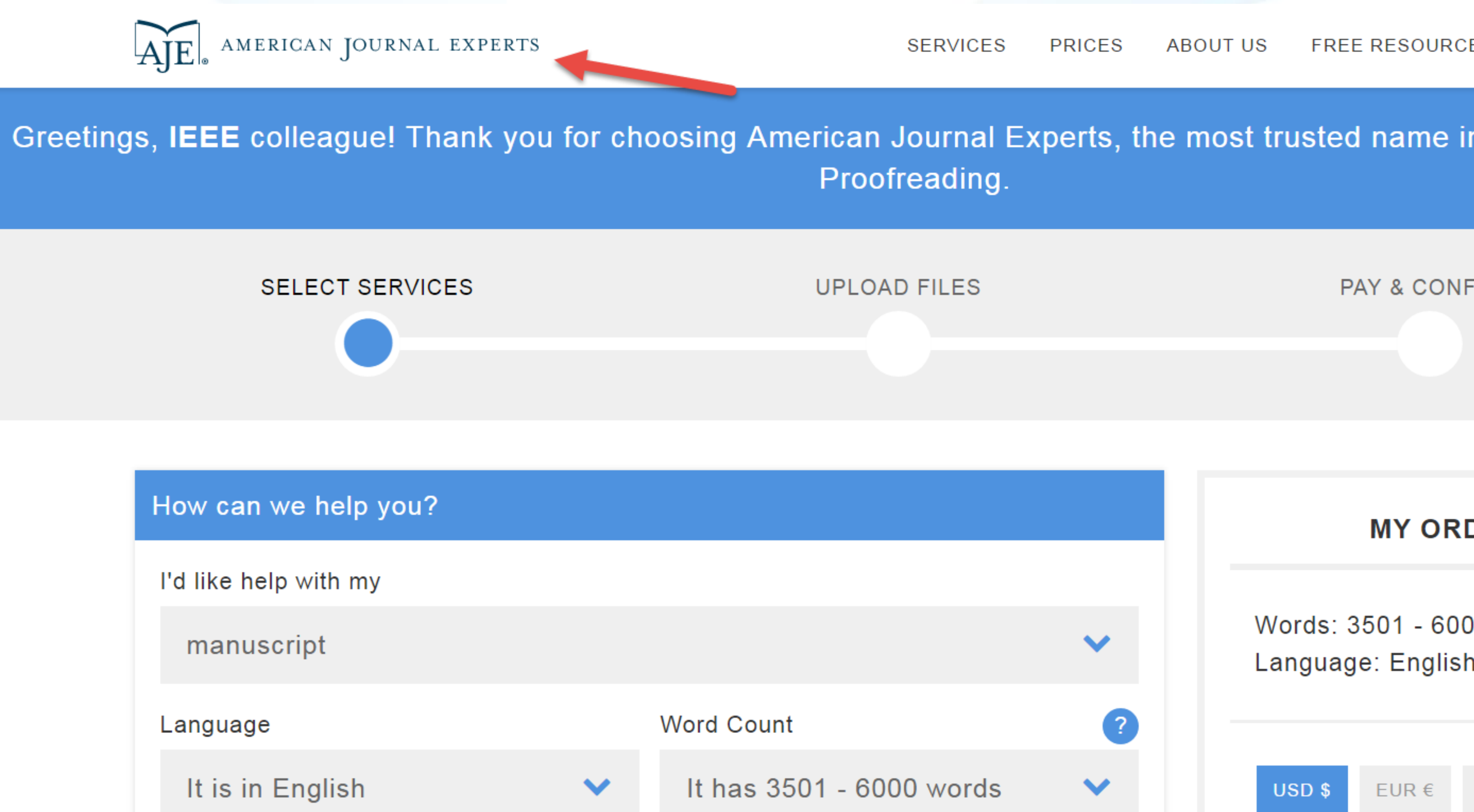

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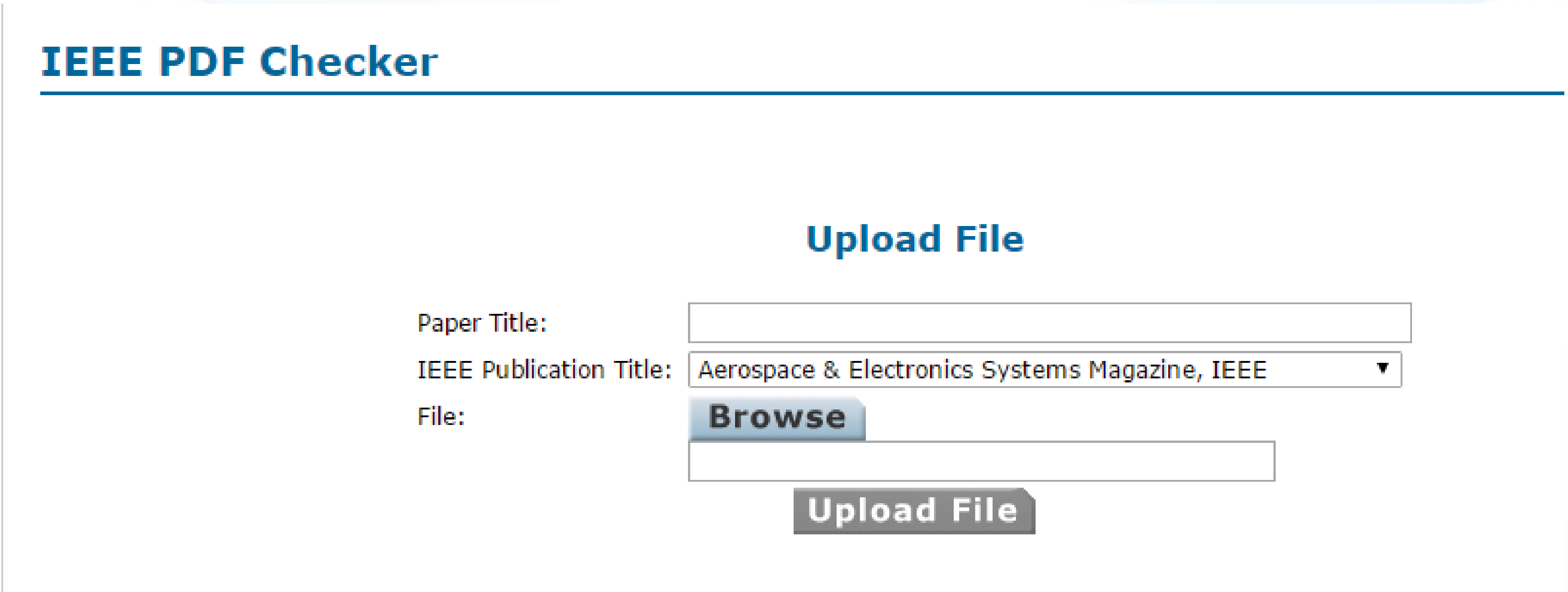

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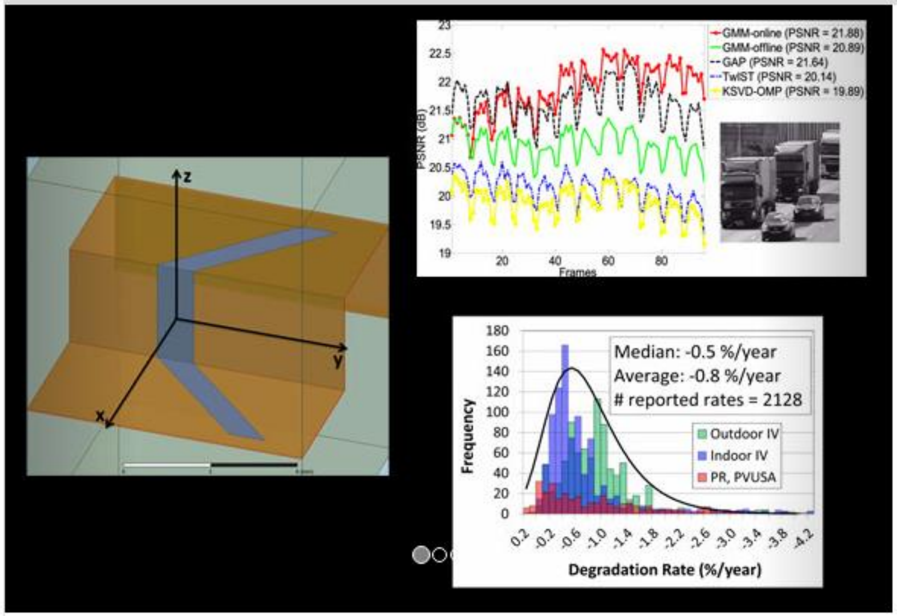

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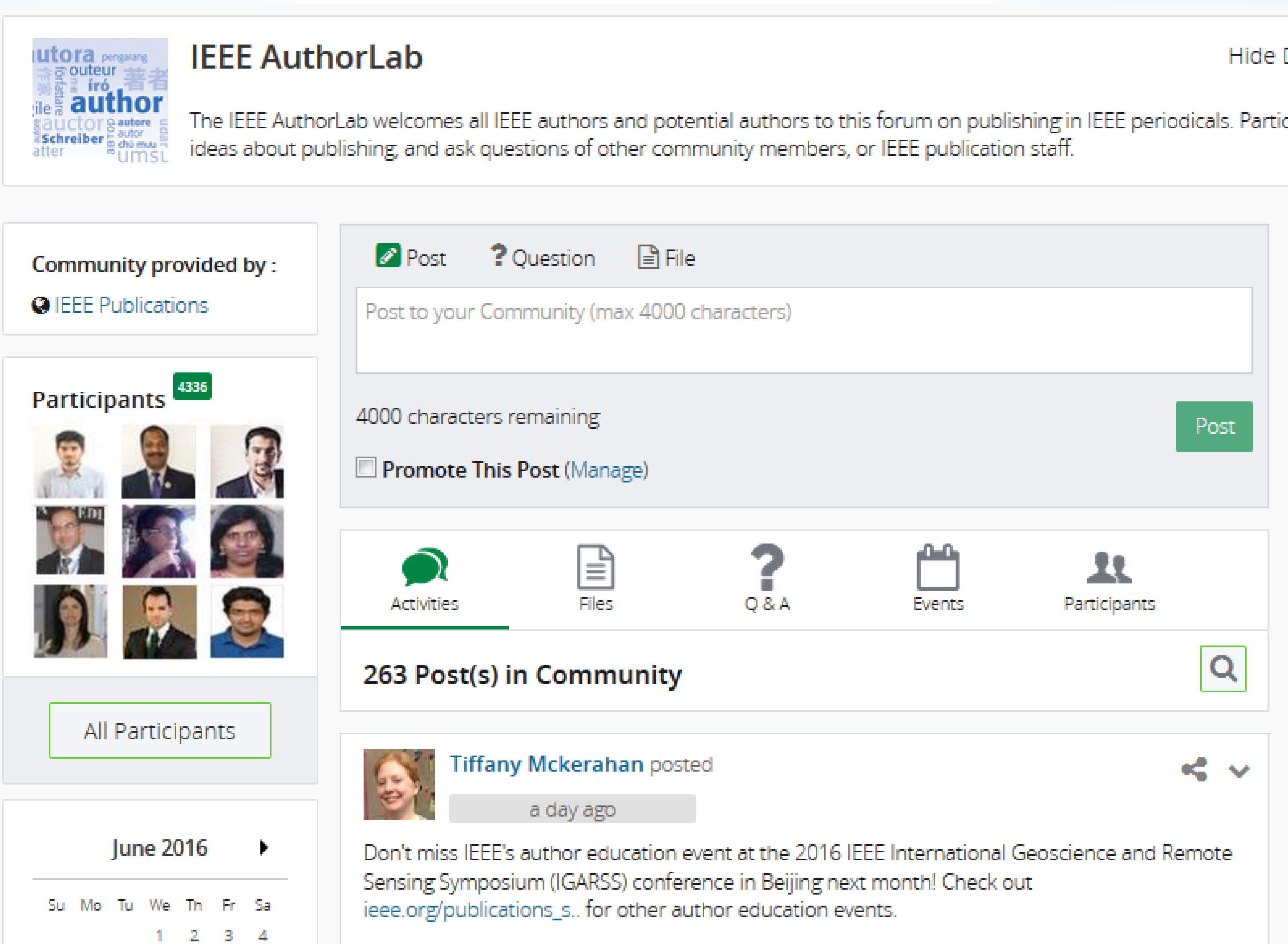

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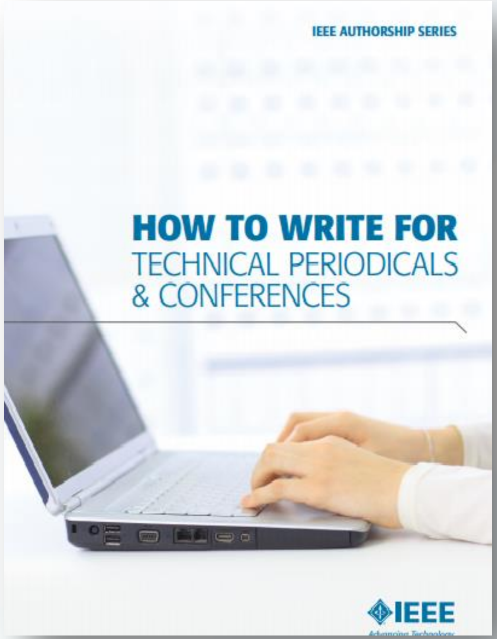

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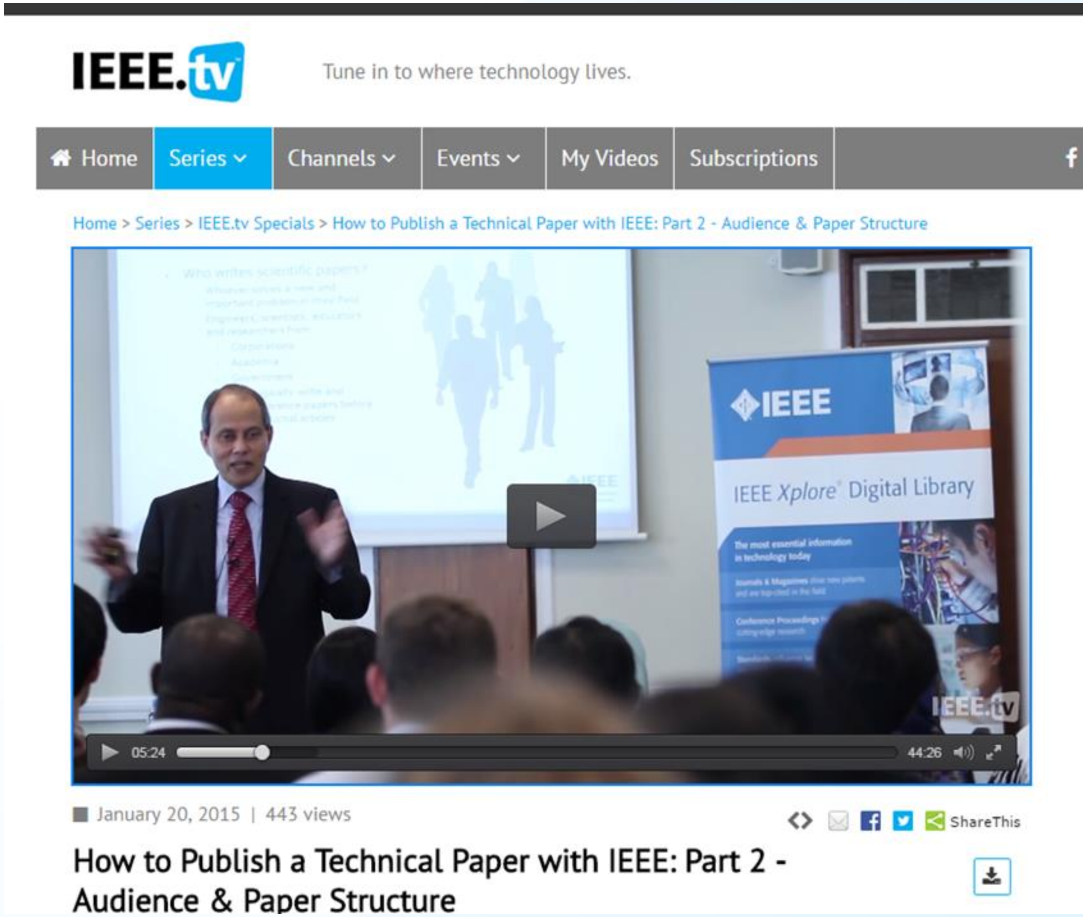

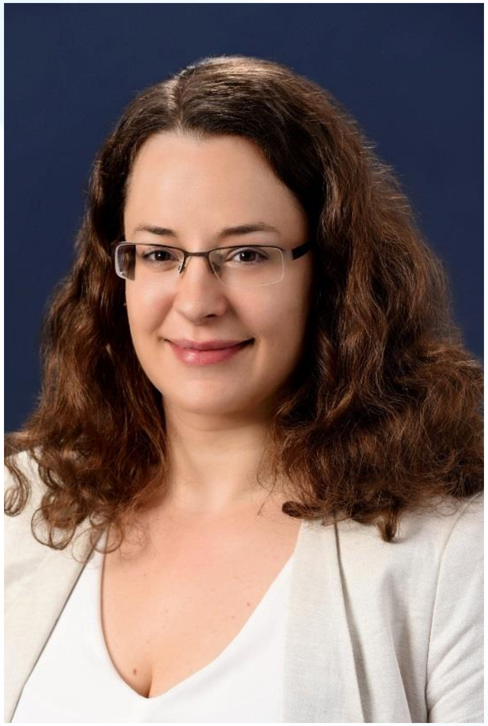

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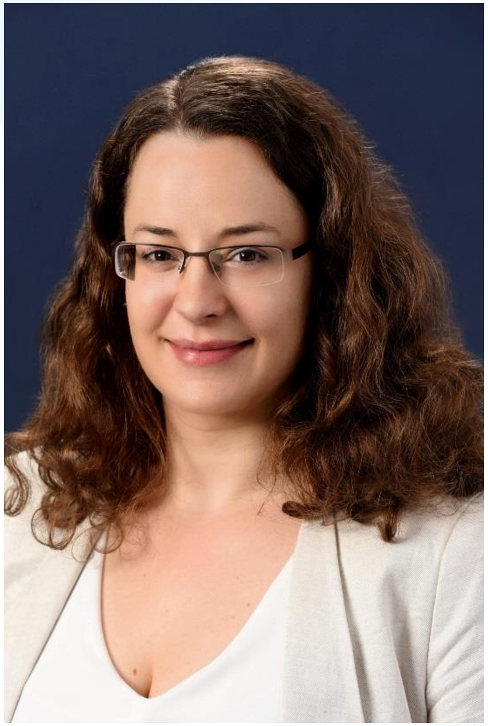

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