

# El uso y valor de la Biblioteca Digital IEEE *Xplore*

**UNIVERSITAT DE VALENCIA**

**Federico Peña**

**Delegado IEEE**

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# IEEE ([www.ieee.org](http://www.ieee.org))

- Sociedad técnica profesional sin fines de lucro (Non-profit)
- Más de 430,000 miembros en 160 países
- Publicaciones y actividades principales:
  - Revistas
  - Conferencias
  - Normas técnicas (Standards)
  - eBooks (IEEE, MIT, Morgan & Claypool)
  - Educación (eLearning, English for Engineering, etc.)



## La Misión del IEEE...

*“Innovación y excelencia tecnológica  
para el beneficio de la humanidad”*

# IEEE cubre todas las áreas de la tecnología

Más que ingeniería eléctrica e informática

Comunicación  
Energía renovable  
óptica  
Nanotecnología  
LTE Electrónica  
Seguridad cibernética  
Grandes datos Circuitos  
Sistema de poder Antena  
seguridad solar sensor  
Banda ancha inalámbrica robot Red neuronal  
Vehículos autónomos  
Telecomunicaciones  
Informática IoT Realidad virtual  
Computación en nube  
Imagen Red inteligente  
computadora  
Ingeniería biomédica  
Semiconductores

## Conferencias y revistas: texto completo de las 39 sociedades de IEEE

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

# Nuevas revistas: 2018

Todas incluidas en subscrip. IEL

- In 2018, these new journal titles will be available in IEEE *Xplore*:
- **IEEE Letters of the Computer Society**  
A rigorously peer-reviewed forum for rapid publication of brief articles describing high-impact results in all areas of interest to the IEEE Computer Society.
- **IEEE Control Systems Letters**  
Peer-reviewed brief articles that provide a rapid and concise account of innovative ideas regarding the theory, design, and applications of all aspects of control engineering.  
(Published mid 2017)
- **IEEE Sensors Letters**  
Articles on the theory, design, fabrication, manufacturing, and application of devices for sensing and transducing physical, chemical, and biological phenomena, with emphasis on the electronics and physics aspects of sensors and integrated sensor-actuators.  
(Published mid 2017)
- **IEEE Solid-State Circuits Letters**  
Original and significant contributions in the area of solid-state circuits with an emphasis on the transistor-level design of integrated circuits (ICs). Circuits integrated in micro- and nano-electronic (e.g., VLSI) technologies are of principal interest.
- **Coming soon in late 2018:**  
IEEE Internet of Things Magazine  
IEEE Transactions on Medical Robotics and Bionics

# Las publicaciones de IEEE impactan la investigación y desarrollo

## Thomson Reuters Journal Citation Reports® by Impact Factor

### IEEE publica:

**22 of the top 25** 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)

## Conversational Interfaces

Powerful speech technology from China's leading Internet company makes it much easier to use a smartphone.



**Availability:** now

## Reusable Rockets

Rockets typically are destroyed on their maiden voyage. But now they can make an upright landing and be refueled for another trip, setting the stage for a new era in spaceflight.



**Availability:** now

## Robots That Teach Each Other

What if robots could figure out more things on their own and share that knowledge among themselves?



**Availability:** 3-5 years

## Tesla Autopilot

The electric-vehicle maker sent its cars a software update that suddenly made autonomous driving a reality.



## Power from the Air

Internet devices powered by Wi-Fi and other telecommunications signals will make small computers and sensors more pervasive.



**Availability:** 2-3 years

## IEEE Xplore:

- 22,800+ articles on “speech technology”
- 89 articles published by authors from Baidu, the leading internet search engine in China

## IEEE Xplore:

- 6,000+ articles on “aerospace propulsion technology”
- 60+ articles on “reusable rockets”

## IEEE Xplore:

- 11,000+ articles on “intelligent robots”
- 37,000+ articles on “machine learning”

## IEEE Xplore:

- 3,000+ articles on “autonomous vehicles”
- 9 articles written by Tesla Motors
- Many articles published by authors from Ford, Google, Toyota, and Nissan

## IEEE Xplore:

- 4,000+ articles on “wireless power or inductive power transfer”
- Many articles published by authors from Samsung, Texas Instruments, and University of Washington

## DNA App Store

An online store for information about your genes will make it cheap and easy to learn more about your health risks and predispositions.



Availability: this year

## SolarCity's Gigafactory

A \$750 million solar panel facility in Buffalo will produce a gigawatt of high-efficiency solar panels per year and make the technology far more attractive to homeowners.



Availability: next year

## Slack

A service built for the era of mobile phones and short text messages is changing the workplace.



Availability: now

## Immune Engineering

Genetically engineered immune cells are saving the lives of cancer patients. That may be just the start.



Availability: 1-2 years

## Precise Gene Editing in Plants

CRISPR offers an easy, exact way to alter genes to create traits such as disease resistance and drought tolerance.



Availability: 5-10 years

## IEEE Xplore:

- 4,000+ articles on "DNA sequencing"
- Illumina, a key player in consumer genomics, published 4 articles, one of which was cited 40 times

## IEEE Xplore:

- 20,000+ articles on "solar power"
- Articles available from Solar City and Silevo on high efficiency solar cells

## IEEE Xplore:

- 40,000+ articles on "electronic mail"
- 12,000+ articles on "social networking technology"

## IEEE Xplore:

- 150+ articles on "immune systems and genetic engineering" published as far back as 1994

## IEEE Xplore:

- 100+ articles on "genomes and plants" published as far back as 1988
- 2 articles on "CRISPR technology"

# Países con mayor número de descargas de IEEE Xplore

# 1 China



# 2 EE.UU.



# 3 India



# 4 Taiwán



# 5 Alemania



# 6 Corea del Sur



# 7 Reino Unido



# 8 Japón



# 9 Canadá



# 10 Australia



Actualizado en agosto del 2016

# Filtrando diferentes tipos de Contenido en IEEE Xplore: Mucho más allá de Google



**Revistas:** Presentación de resultados acabados

- El estado del arte:
  - Magazines
  - Journals & Transactions
  - Letters



**Conferencias:**

- Enfoque: Aplicaciones específicas y “feedback” (comentarios)
- Resultados preliminares, en proceso
- Desarrollo de comunidades con tecnologías emergentes
- Más de 2.7 millones de documentos

**Normas (*Standards*)**

- Un ciclo:
  - Publicados y activos
  - Borradores
  - Activos
  - Archivados
  - Retirados
  - Redline, etc.

|                     | 802.16                          | 802.16a                                                  | 802.16e            |
|---------------------|---------------------------------|----------------------------------------------------------|--------------------|
| Spectrum            | 10 - 66 GHz                     | 2 - 11 GHz                                               | <6 GHz             |
| Configuration       | Line of Sight                   | Non- Line of Sight                                       | Non- Line of Sight |
| Bit Rate            | 32 to 134 Mbps (28 MHz Channel) | ≤ 70 or 100 Mbps (20 MHz Channel)                        | Up to 15 Mbps      |
| Modulation          | QPSK, 16-QAM, 64-QAM            | 256 Sub-Carrier OFDM using QPSK, 16-QAM, 64-QAM, 256-QAM | Same as 802.16a    |
| Mobility            | Fixed                           | Fixed                                                    | ≤75 MPH            |
| Channel Bandwidth   | 20, 25, 28 MHz                  | Selectable 1.25 to 20 MHz                                | 5 MHz (Planned)    |
| Typical Cell Radius | 1-3 miles                       | 3-5 miles                                                | 1-3 miles          |
| Completed           | Dec, 2001                       | Jan, 2003                                                | 2nd Half of 2005   |

- La más conocida, 802.11 (comunicación inalámbrica)

**Otros contenidos:**

- eBooks (3 colecciones)

- IEEE-Wiley
- MIT Press
- Morgan & Claypool

Disponibles como complementos

- Cursos: eLearning and English for Engineering

- Revistas de MIT Press, IBM

- InnovationQ Plus

## IEEE Biblioteca Digital IEEE Xplore en números (Incluido con suscripción IEL)

- 4.1 millones de documentos “full-text” (1872 al presente)
- ~30% de la literatura actual en ingeniería eléctrica, ciencias de computación, y tecnologías relacionadas
- ~1,600+ conferencias anuales (IEEE, IET, VDE Verlag)
- 179 revistas (IEEE, IET)
- 2,800+ normas técnicas activas, aprobadas
- Más de 20,000 documentos nuevos cada mes
- **2,000+ eBooks en 3 Colecciones: IEEE-Wiley, MIT Press, Morgan & Claypool**
- **Cursos online: eLearning (~35 cursos de acceso gratuito) and English for Engineering**
- **InnovationQ Plus (IEEE con IP.com, otra plataforma)**

Disponibles como  
complementos

*Cotizaciones de precios o periodos de pruebas:*

*INFILE España*

# Socios editoriales

- IET and IEEE: partners since 1988
  - Journals and conference proceedings are included in IEL subscriptions – over 200,000 articles!
- IEEE *Xplore* now hosts select content from other leading society publishers:
  - IEEE-Wiley eBooks Library
  - IBM Journal of Research and Development
  - Tsinghua Science and Technology Journal
  - Journal of Systems Engineering and Electronics  
from the Beijing Institute of Aerospace Information
  - VDE Conference Proceedings
  - MIT Press Journals and eBooks Library
  - Bell Labs Technical Journal
  - Morgan & Claypool\*
  - And the SMPTE Digital Library - 23,000 documents in all, including unlimited full-text access to all SMPTE standards, journal articles, and conference papers in motion imaging



# eLearning y otros Cursos Virtuales (series)



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34 courses in all

- ☐ Cloud Security and Data Protection
- ☐ Cloud Construction
- ☐ Cloud Software as a Service
- ☐ Cloud Infrastructure as a Service Architecture
- ☐ Cloud Benefits and Challenges
- ☐ Cloud PaaS Design with Azure
- ☐ Cloud Standards and Composition Overview
- ☐ Cloud Data Center Network Core
- ☐ Cloud IaaS Service Management



## Fundamentals for Technical Professionals

9 courses in all

- ☐ Career Networking for Technical Professionals
- ☐ Communication & Presentation Skills for Technical Professionals
- ☐ Engineering Ethics – Building a Strong Foundation
- ☐ Fundamentals of Metrology & Measurement
- ☐ Fundamentals of Patent



## Transportation

9 courses in all

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- ☐ Transportation Electrification: Electric Machines in Electric Drive Trains
- ☐ Transportation Electrification: Intro. to Power Electronics in Electric Drive Trains
- ☐ Transportation Electrification: Power Semiconductors Used in Electric Drive Trains
- ☐ Introduction to Batteries
- ☐ Battery Design Principles
- ☐ Lithium-ion Batteries
- ☐ Modeling Lithium-ion Batteries
- ☐ Next Generation Batteries

### Course Series:

- Cyber Security – 11 courses added
- Ethical Hacking – 10 courses added
- Smart Cities
- Big Data
- Internet of Things – May 2017
- And more!

See full list of courses:

[www.ieee.org/go/elearning](http://www.ieee.org/go/elearning)

Try free courses:

# Cursos de eLearning re-diseñados

IEEE.org | IEEE Xplore Digital Library | IEEE-SA | IEEE Spectrum | More Sites

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### Categories

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|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <br>Aerospace                    | <br>Bioengineering                           | <br>Communication, Networking & Broadcasting | <br>Components, Circuits, Devices & Systems | <br>Computing & Processing         |
| <br>Engineering Profession     | <br>English for Engineering                | <br>Fields, Waves & Electromagnetics       | <br>Free Tutorials                        | <br>General Topics for Engineers |
| <br>Photonics & Electro-Optics | <br>Power, Energy, & Industry Applications | <br>Robotics & Control Systems             | <br>Signal Processing & Analysis          | <br>Transportation               |

 **IEEE**  
Advancing Technology  
for Humanity

# *English for Engineering: Enfocado en diferentes habilidades y niveles:*

■ Four learning modules to develop key skills:

1. Speaking in technical English
2. Listening and comprehension
3. Technical writing
4. Reading and understanding technical publications

All available at [www.ieee.org/education/learning/for-engineering](http://www.ieee.org/education/learning/for-engineering)



# IEEE es el líder en citaciones de patentes

Numero de referencias de patentes de las 40 organizaciones líderes a las principales editoriales de revistas



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

# Gracies