

# Seminar in Honor of Kees Schouhamer Immink

**The IEEE, and its medal of honor**

**Dirk Van Hertem  
Benelux section chair**

**Rotterdam, June 16, 2017**

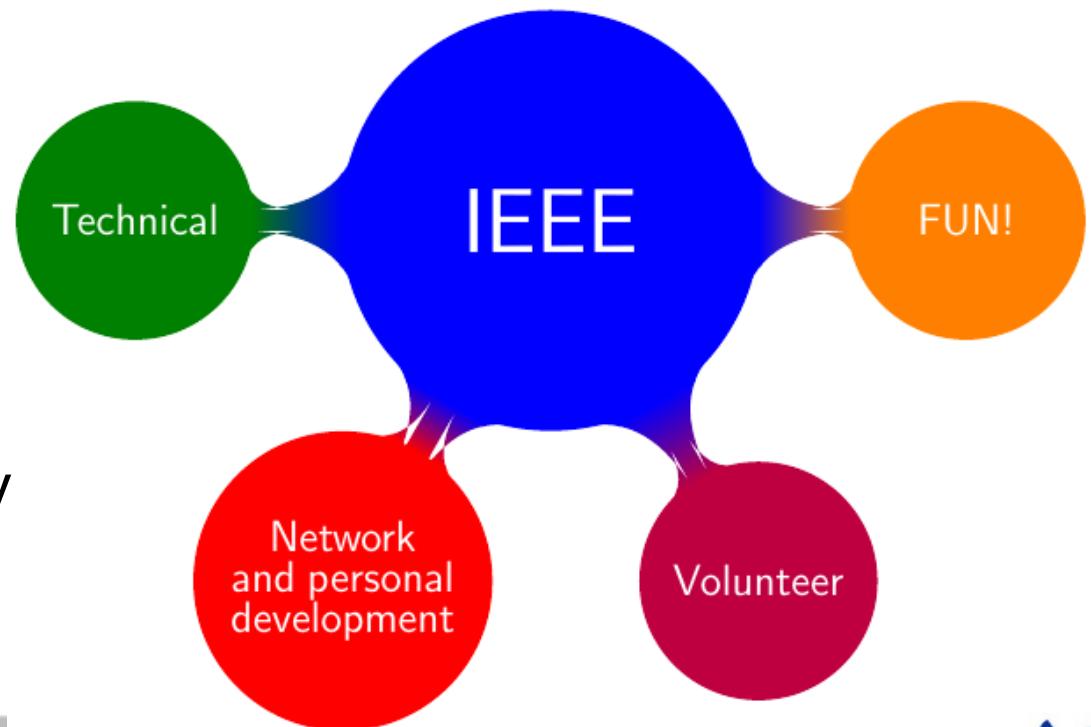


# What is IEEE?

Originally: Institute for electrical and electronics engineers

**Mission:** Advance technological innovation  
and excellence for the benefit of humanity

Local and global  
Academia and industry  
For young & old



1884

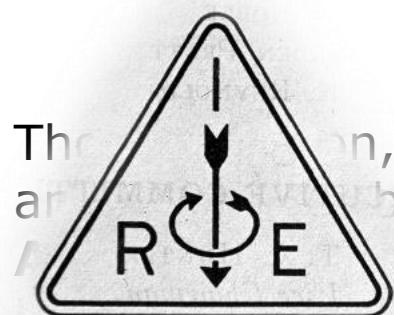
1912

1963

Present



**AIEE**  
American Institute  
of Electrical Engineers



**IRE**  
Institute of Radio  
Engineers

Pioneers of wireless technologies and electronics founded the **Institute of Radio Engineers**. AIEE and IRE merged to become the Institute of Electrical and Electronics Engineers, or **IEEE**.



## Our Global Reach

**421,000+**  
Members



**39**  
Technical Societies



**160**  
Countries



## Our Technical Breadth

**1,600**  
Annual Conferences



**3,900,000+**  
Technical Documents



**170+**  
Top-cited Periodicals



- Consumers around the world enjoy the benefits of IEEE's standards.

**Here are a few you may recognize...**

IEEE  
802.11



IEEE  
1800



IEEE  
1394



IEEE  
802.3



IEEE  
802.15.4



IEEE  
835



- Bright minds share the latest research at IEEE sponsored and co-sponsored conferences around the world.

**1,600+ Annual Conferences**



**Research**

**Collaboration**

**Publications**

- › IEEE advances author ideas by publishing research for delivery to key technical audiences.

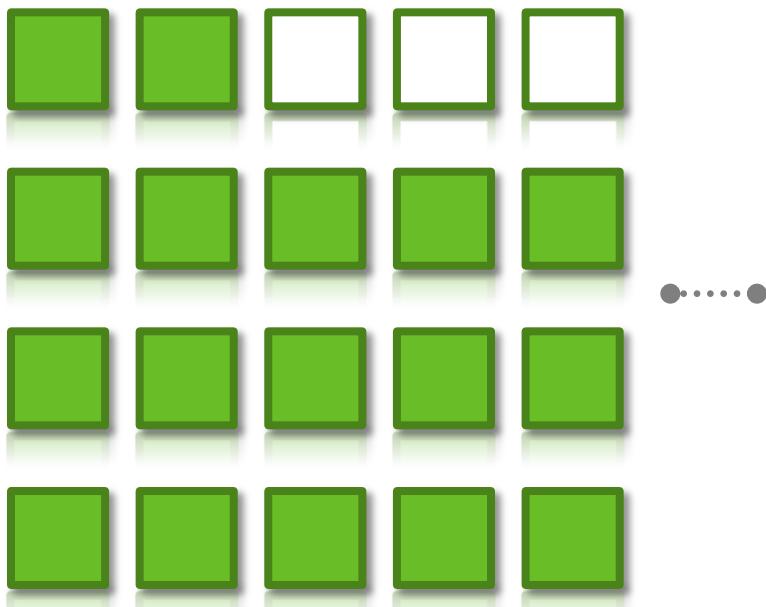


IEEE is the premier source of journals in our fields of interest.



**170+ top-cited periodicals**

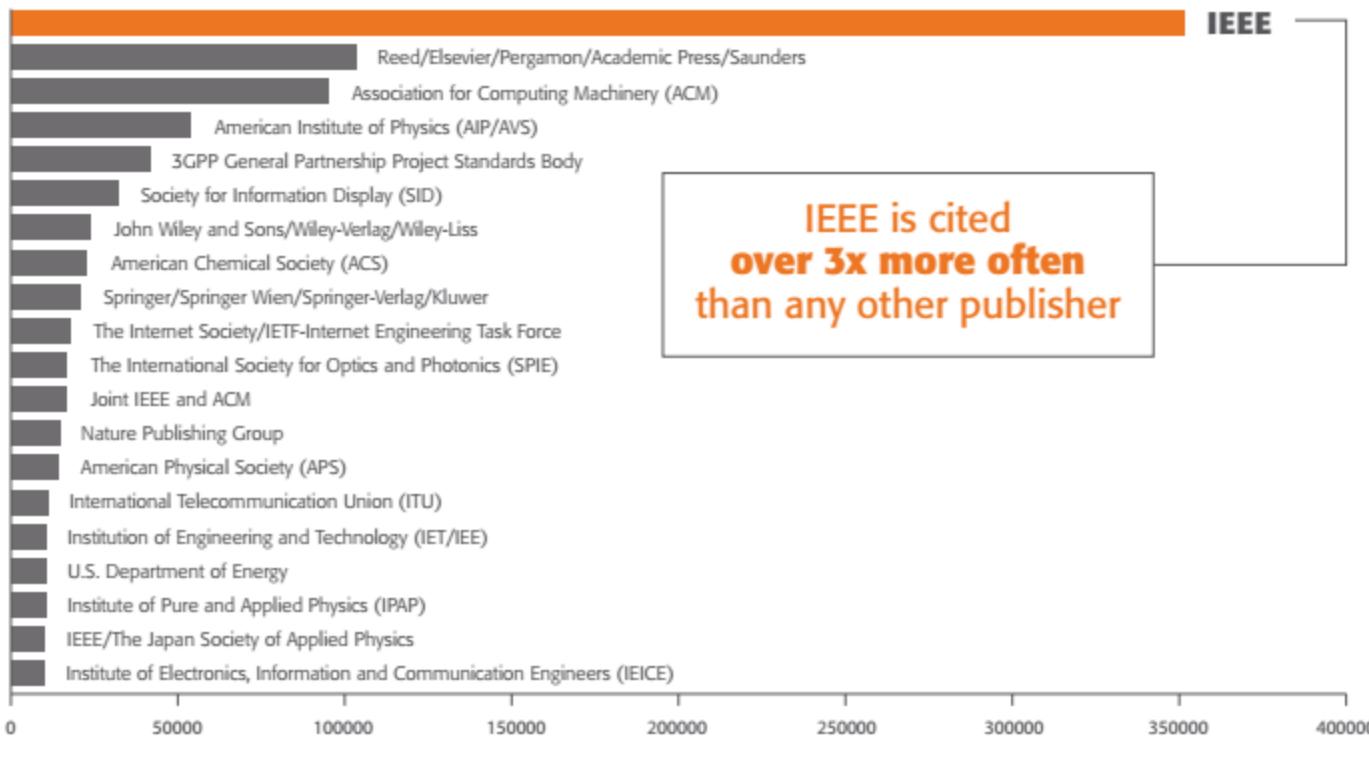
- 2014 JCR® study reveals IEEE journals continue to maintain rankings at the top of their fields.



**17 of the top 20**  
journals in electrical engineering  
are published by IEEE.

Source: 2013 Thomson Reuters Journal Citation Reports® (JCR)

➤ IEEE leads as the most-cited publisher in new patents from the top patenting organizations.



# Benelux section [www.ieee.be](http://www.ieee.be)

**Oldest Section in Europe (founded 13 May 1959, exactly 75 years after the foundation of the AIEE, the other parent organization of IEEE)**



**One of the larger sections in IEEE Region 8**

**Around 3200 members**

**7 Student branches (Eindhoven, Twente, Delft, Ghent, Leuven, Liège, Louvain-la-Neuve)**



**3 affinity groups (Women in engineering, young professionals, Life members)**

**17 technical chapters**



B. B. Barrow

*Advancing Technology  
for Humanity*

# 17 technical chapters

- Aerospace and Electronic Systems / Geoscience and Remote Sensing (AES/GRS)
- Antennas and Propagation / Microwave Theory and Techniques (AP/MTT)
- Circuits and Systems (CAS)
- Communications & Vehicular technology (COM/VT)
- Computational intelligence (CI)
- Computer (C)
- Electromagnetic Compatibility (EMC)
- Council on electronic design automation (CEDA) chapter on embedded systems
- Engineering in Medicine and Biology (EMB)
- Industry Applications/Power electronics / Power Engineering (IA/PEL/PE)
- Information Theory (IT)
- Instrumentation and measurement (IM):
  - Photonics (LEO)
  - Robotics and automation (RA)
  - Signal Processing (SP)
  - Solid-state Circuits (SSC)
  - Technology Management (TM)

# IEEE Awards



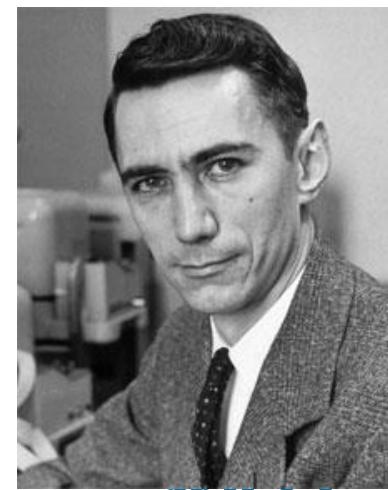
**IEEE medal of honor**

# IEEE Awards: the medal of honor

- IEEE recognizes excellence through a range of prestigious awards
- IEEE medal of honor is the highest IEEE award
- Established 1917, sponsored by the IEEE foundation
- *Presented when a candidate is identified as having made a particular contribution that forms a clearly **exceptional addition to the science and technology** of concern to IEEE*
- **Basis for judging:** In the evaluation process, the following criteria are considered: substantial significance of achievement, originality, impact on society, impact on the profession, publications, and patents relating to the achievement. The quality of the nomination is also considered.

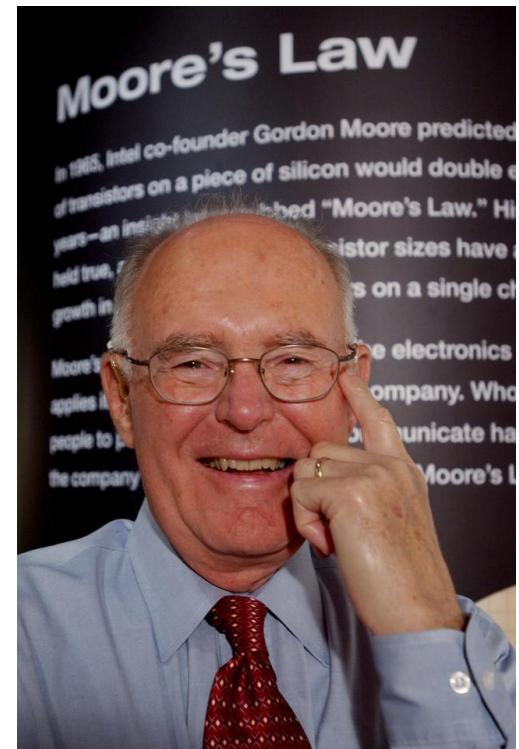
# Past recipients

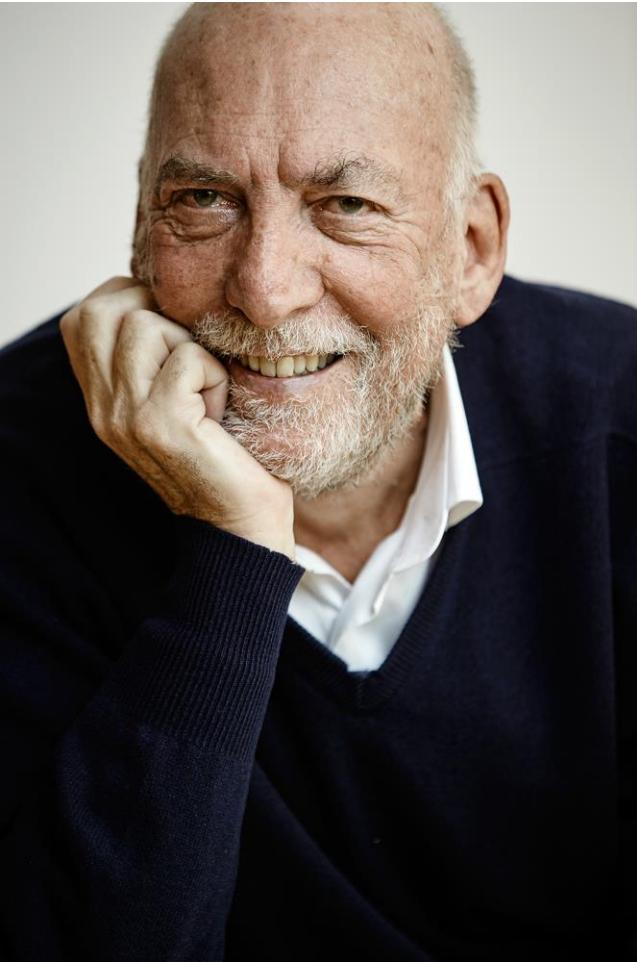
- 1920 -- GUGLIELMO MARCONI -- "In recognition of his pioneer work in radio telegraphy."
- 1935 -- BALTH. VAN DER POL -- "For his fundamental studies and contributions in the field of circuit theory and electromagnetic wave propagation phenomena."
- 1960 -- HARRY NYQUIST -- "For fundamental contributions to a quantitative understanding of thermal noise, data transmission and negative feedback."
- 1966 -- CLAUDE E. SHANNON -- "For his development of a mathematical theory of communication which unified and significantly advanced the state of the art."



# Past recipients

- 1974 -- RUDOLF EMIL KALMAN -- "For pioneering modern methods in system theory, including concepts of controllability, observability, filtering, and algebraic structures."
- 1980 -- WILLIAM SHOCKLEY -- "For the invention of the junction transistor, the analog and the junction field-effect transistor, and the theory underlying their operation."
- 2008 -- GORDON E. MOORE -- "For pioneering technical roles in integrated-circuit processing, and leadership in the development of MOS memory, the microprocessor computer and the semiconductor industry."



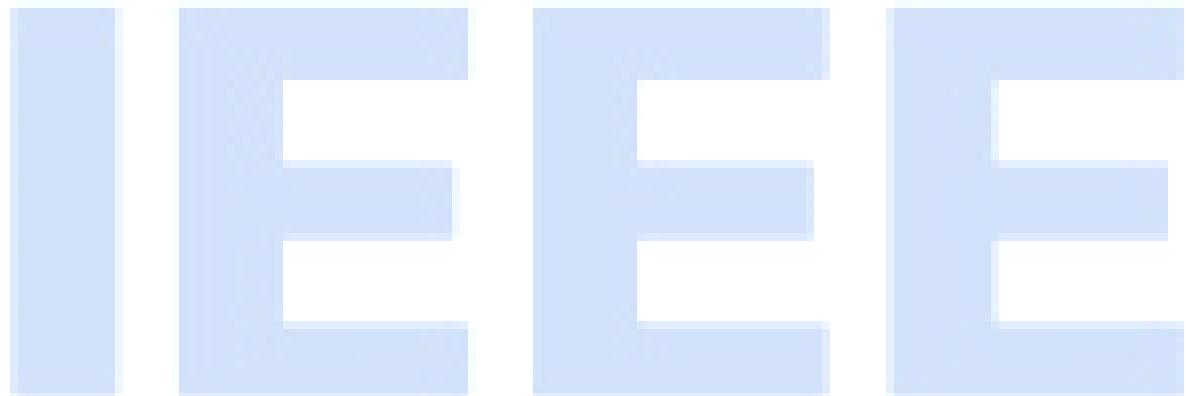


IEEE 2017 medal of  
honor recipient

# **KEES SCHOUHAMER IMMINK**

FOR PIONEERING CONTRIBUTIONS TO  
VIDEO, AUDIO, AND DATA RECORDING  
TECHNOLOGY, INCLUDING COMPACT  
DISC, DVD, AND BLU-RAY.

**CONGRATULATIONS FROM THE IEEE  
BENELUX SECTION!**



[www.ieee.be](http://www.ieee.be), [benelux@ieee.org](mailto:benelux@ieee.org), Dirk Van Hertem