



**IEEE Communications Society**  
**Wireless Communication Engineering Technologies**

# IEEE WCET Certification

for Wireless Communications Professional

**Rulei Ting, PhD**

**Chair, Communications Certification Ad Hoc Committee**

**[rt@ieee.org](mailto:rt@ieee.org)**



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**Wireless Communication Engineering Technologies**



# WCET Certification - Why

## Created to help:

- Address the continuing education needs of wireless communications professionals
- Meet industry's need for qualified wireless professionals

*“WCP certification greatly helps to communicate my capabilities to others; ... **preparing for and maintaining the certification has been great for my continuing education and broadening my background.** The certification procedure also helps me to understand my strengths and weaknesses in the field.”*

- Chris Barroso

IEEE Wireless Communications Professional®  
San Diego, CA, USA



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# WCET Certification - Intent

*“I manage a team of engineers ... I would likely use questions such as those posed in the WCET exam to filter out candidates ... I would make hiring decisions based, at least in part, on WCET results.”*

-Subramanian Vasudevan

IEEE Wireless Communications Professional®  
Whippany, NJ, USA

- **IEEE WCET Certification effectively measures skills and knowledge used in contemporary practice**
- **Successful candidates earn the credential “Wireless Communication Professional” (WCP)**



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# Who Qualifies?

*“Wireless technology and practice requires that almost any task performed involves intuition, knowledge, and context in a broad range of areas even when the task is very specific. **The WCET exam provides professional recognition for those individuals who have the necessary breadth and can be counted on as effective practitioners in the engineering, deployment, or operation of wireless systems.**”*

- Adam Drobot

WCET Industry Advisory Board Member  
formerly Telcordia

- **Primarily designed for wireless communication professionals who:**
  - Hold a bachelor’s degree from an accredited institution
  - Have at least three years of professional wireless engineering experience
- **Can help those working in other areas switch to the wireless field**
- **Candidates self-select; no one is excluded from taking this exam**

# WCPs: Why I Got Certified

- To help increase and demonstrate my knowledge of wireless communications
- To gain an industry-acknowledged credential to help advance my career
- To demonstrate my commitment to the wireless industry and the profession
- To understand my strengths in the field and broaden my background

*“Congratulations and well done on gaining this certification. Now that you have gained this qualification it is time to consider introducing the WCET certification program to the team for others to aspire to do the same and add this credential to their professional development plans.”*

*-Ian Rose*

**BT Design, UK**

**Congratulatory note to a member of his staff upon passing the exam**

# How is WCET Different?

- Vendor-neutral
- Trans-national
- WCET focus is explicitly on the knowledge and on-the-job experience that a practicing wireless communications professional needs to be successful globally in this industry

# Where are the WCPs?



*And the list keeps growing!*

- Australia
- Argentina
- Brazil
- Canada
- China
- Colombia
- Denmark
- Ecuador
- Egypt

- Ghana
- Hong Kong
- India
- Ireland
- Japan
- Taiwan
- Trinidad & Tobago
- Turkey
- Korea

- Kuwait
- Luxembourg
- Macao
- Malaysia
- Mexico
- New Zealand
- Nigeria
- Saudi Arabia
- Singapore
- Spain
- United Arab Emirates
- United Kingdom
- United States
- Venezuela

# Top 5 Reasons for Organizations to Support WCET

*"Started a consulting practice in wireless communications, specializing in point to point connections ... I felt that this certification would enhance my qualifications with new clients."*

*- Tom Lavrisa, IEEE WCP  
Kanata, ON, Canada*

- 1. WCP credential holders have demonstrated a thorough knowledge of wireless engineering technology concepts.**
- 2. WCP credential holders have shown their skill in applying this knowledge to practical problems.**
- 3. WCP credential holders have successfully responded to a significant challenge in earning the credential.**

## Top 5 Reasons for Organizations to Support WCET (2)

*“WCET certification distinguishes me as a wireless expert. For customers, the certification helps provide a level of trust that they are being advised by a certified wireless engineer.”*

- Jeff Smith, IEEE WCP  
Cisco Systems, Inc.  
Englewood, CO, USA

4. Investing in employees aids in retaining them.
5. Supporting the WCP credential makes a powerful statement to customers about the caliber of your people and your commitment to best practices.

# Companies Who Employ IEEE WCPs Worldwide

- AT&T
- Alcatel-Lucent
- BAE Systems
- Bell
- Boeing
- British Telecom
- Cincinnati Bell
- KDDI
- Motorola
- NCR
- NTT Docomo
- Rogers Communications Inc.
- SAIC (Science Applications International Corp.)
- Saudi Aramco
- TASC
- Telefonica
- Texas Instruments
- US Cellular
- US Army
- Verizon
- WIPRO



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# Subject Areas Covered

The exam's 150 questions measure knowledge and skill in seven wireless communications areas:

- **RF Engineering, Propagation, and Antennas** (19-23%)
- **Wireless Access Technologies** (19-23%)
- **Network and Service Architecture** (19-23%)
- **Network Management and Security** (11-15%)
- **Facilities Infrastructure** (6-8%)
- **Agreements, Standards, Policies, and Regulations** (6-8%)
- **Fundamental Knowledge** (8-12%)

# Industry Advisory Board: Keeping the Exam Current

- M. Ahsan Baig, CITY OF OAKLAND
- Asok Chatterjee, ERICSSON
- Wu Chou – HUAWEI
- Fadel F. Digham, NATIONAL TELECOM REGULATORY AUTHORITY
- Javan Erfanian, BELL MOBILITY, CANADA
- Gerry Flynn, VERIZON WIRELESS
- Robert Fonow, TRIVON AG
- Ashley Hunter, TELSTRA
- Hyung Hee Lee, SK TELEKON
- Francis E. O'Brien, Jr., ALCATEL-LUCENT
- Arun K. Pande, TATA CONSULTING SERVICES
- Don Winter, THE BOEING COMPANY
- Norikazu Yamasaki, KIDDI CORPORATION
- Byung K. Yi, LG ELECTRONICS



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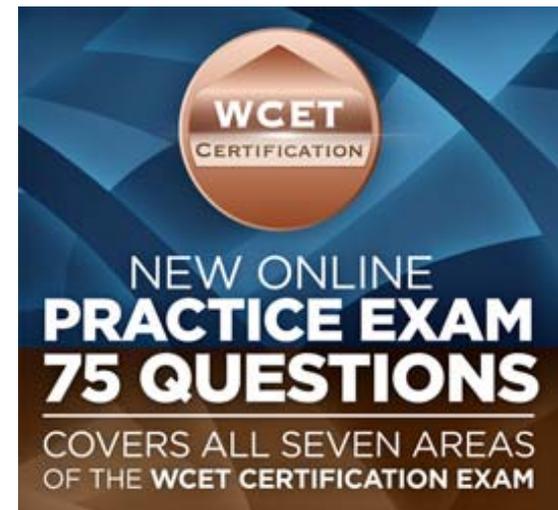


# Exam Specifics

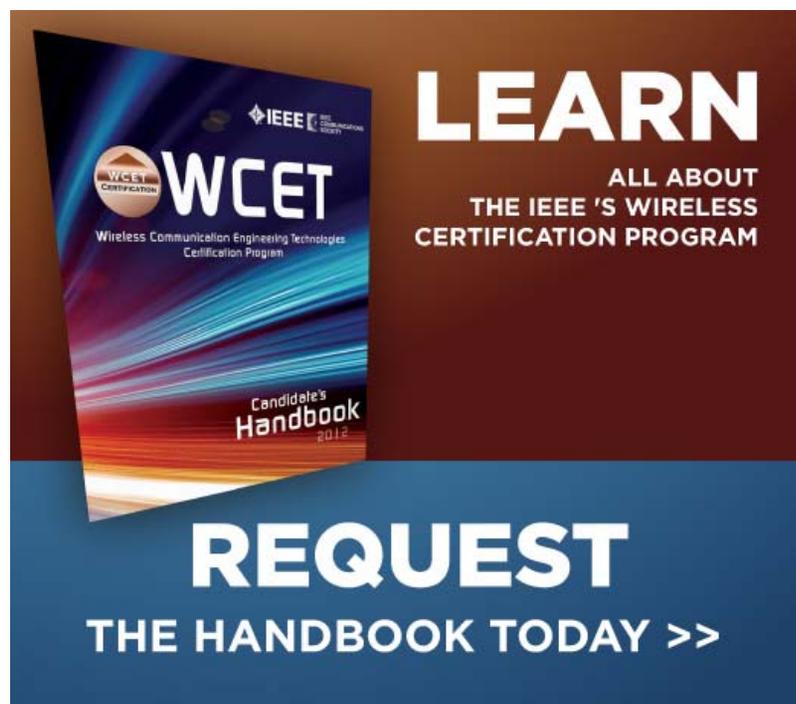
- Examination Details
  - Four-hour, 150-question multiple-choice exam
  - Given at secure computer-based testing centers (Pearson VUE)
- Examination Fees
  - US\$450 for IEEE and ComSoc members
  - US\$550 for non-members
  - Includes application fee, seat fee, score report
- Set the date of your exam during the exam window at a testing center local to you
- Competitive pass rate; this is a difficult exam – preparation is required and necessary for success
- Earning the WCP carries significant weight in the industry

# Resources

- **Online Practice Exam**
  - US\$50.00
  - Understand your areas of strength and where you could use some extra work
- **ComSoc Training**
  - [www.comsoc.org/training](http://www.comsoc.org/training)
  - Get up to speed quickly while learning from experts in the field
  - Member discounts / Group pricing
  - Offer a combination Exam Seat + 5 day Course for one low price / one invoice



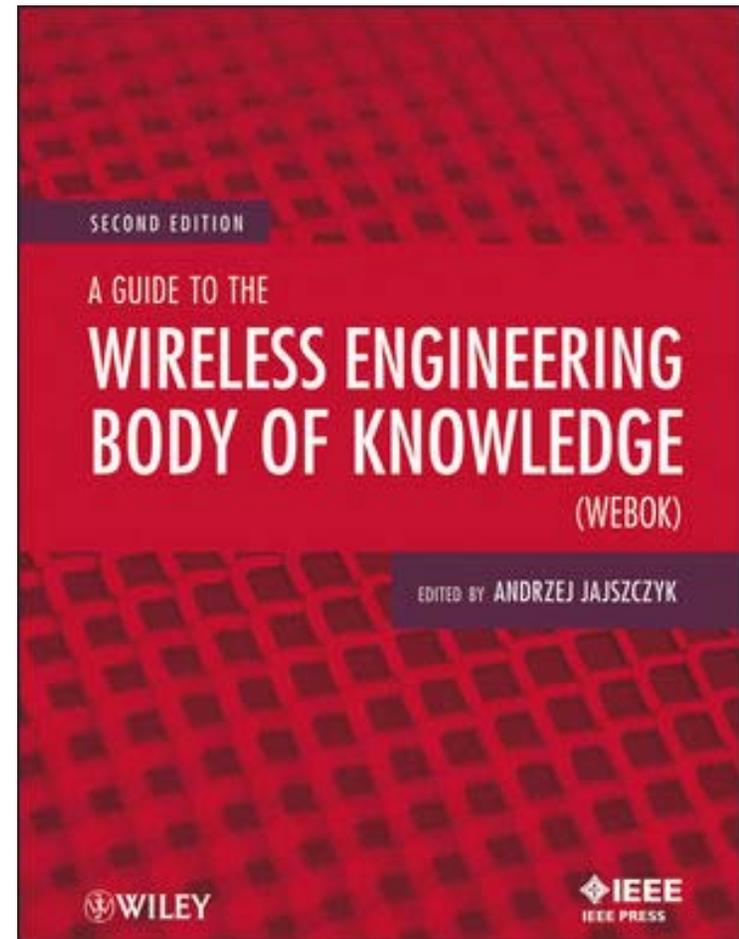
# Candidate's Handbook



- **FREE on request**
  - To help you determine if getting IEEE WCET Certified is right for you
- **Provides insight on:**
  - Subject areas covered
  - Application procedures
  - Sample references
  - Sample questions
  - Contact information
- **Electronic & print versions available**

# WEBOK

- *Second Edition released October 2012; published by Wiley*
- *Covers seven key areas in wireless with detailed references at the end of each chapter*
- *1<sup>st</sup> edition sold over 2,000 copies*



# FREE Resources



*Over 9,000 opt-in subscribers and growing!*

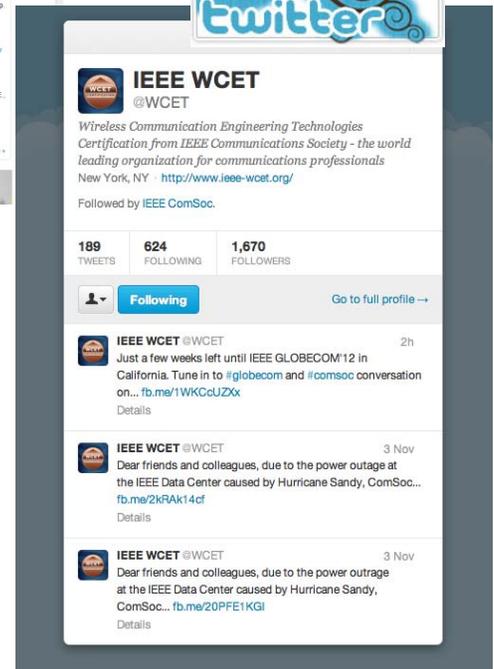
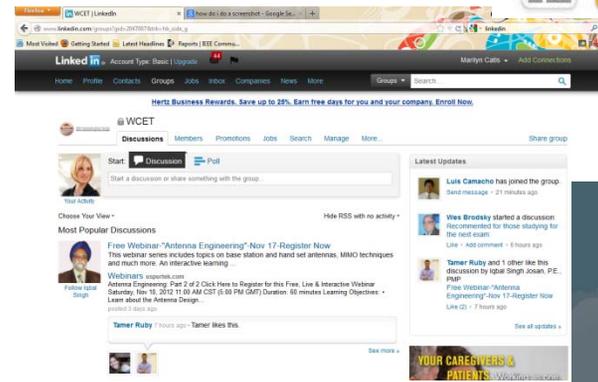
- Bi-monthly news service designed to help you manage your career by bringing you up-to-date information on the wireless industry
- Free ComSoc Webinars
- Visit [www.ieee-wcet.org](http://www.ieee-wcet.org) to access:
  - Glossary of common wireless communication terms
  - List of sample references
  - Sample test questions



# Social Networking



- 2 Groups on LinkedIn
  - Over 1,820 on WCET
  - Over 175 in private study group
- Twitter
  - 2,950 followers
- facebook
  - 3,891 unique likes



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# Preparation for WCET Certification

- Training & Certification Package Deal
  - Discounted package rate for groups
  - One discounted price for a seat in both the 5 day course and for the WCET exam
  - Valid for a specific testing window
    - Spring 2015
    - Fall 2015



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Confidential information.

# WCET Exam in 2015

**New Partnership with  
Professional Testing &  
Pearson VUE**



**WCET Certification Exam  
Application Fees:  
\$550 for non-members  
\$450 for members**

**Spring Testing Window:  
12 April – 9 May  
Applications Due: 27 March**  
**Fall Testing Window:  
27 September – 24 October  
Applications Due: 11 September**

**WCET** IEEE WIRELESS COMMUNICATION  
ENGINEERING TECHNOLOGIES  
CERTIFICATION

IEEE IEEE COMMUNICATIONS  
SOCIETY

Home My account Log out

### Create WCET Application

GENERAL INFORMATION

First Name \*

Middle Initial

Last Name \*

Date of Birth \*  
Oct 1 1963

Gender

Home Address

Country \*

Address 1 \*

Address 2

City \* State \* ZIP Code \*

Home Telephone \*



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*ComSoc Chapters can encourage members to-*

*to obtain the IEEE WCP credential: get trained and certified;*

*to volunteer: become an item writer and join the committee;*

*to benefit from WCET that is developed for communication practitioners.*

**WCET** | IEEE WIRELESS COMMUNICATION ENGINEERING TECHNOLOGIES CERTIFICATION

IEEE COMMUNICATIONS SOCIETY

CANDIDATES EMPLOYERS WCPs PARTNERS

LEARN APPLY RESOURCES

**3 Steps to Certification:**

1. Apply for the Exam
2. Prepare for the Exam
3. Take the Exam

**Boost Your Career!**

With IEEE WCET® certification, you are able to clearly demonstrate your knowledge of wireless communication technologies to employers and be prepared for new opportunities as they arise in various engineering fields in the wireless industry. Recertification every five years denotes your continued commitment to the professional and desire to stay up-to-date in the field.

**Recommended Education and Experience:**

- >> Degree from an accredited college or university
- >> Graduate-level educational experience may be comparable to an equivalent period of professional work experience
- >> "Professional wireless experience" - at least 51% of the candidate's daily professional activities are in the field of wireless communication engineering
- >> A thorough familiarity with the topics covered by the exam as noted in the seven areas of expertise

	Examination Fee*	Recertification Fee
IEEE/IEEE ComSoc Members	US\$450	US\$300
Non-member	US\$550	US\$350

\*A nonrefundable US\$175 application fee is included in the total examination fee

**Benefits**

- >> Globally recognized and vendor-neutral credential
- >> Demonstrates knowledge across the breadth of wireless communications
- >> Cultivates mastery of all aspects of wireless engineering technology for ever growing vertical and horizontal integrations
- >> Recognition of knowledge and on-the-job experience needed to be successful in the industry
- >> Emblem of personal, professional achievement
- >> International industry participation credential development process

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# Please visit IEEE ComSoc and WCET websites for more info



- Visit [www.ieee.org](http://www.ieee.org) for info about IEEE
- Visit [www.comsoc.org](http://www.comsoc.org) for info about IEEE ComSoc
- Visit [www.ieee-wcet.org](http://www.ieee-wcet.org) for info about IEEE WCET and access to:
  - Glossary of common wireless communication terms
  - List of sample references
  - Sample test questions



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