

IEEE COMSOC  
**TRAINING**<sup>TM</sup>  
CONTINUING EDUCATION  
FOR COMMUNICATIONS PROFESSIONALS



**IEEE**

IEEE  
COMMUNICATIONS  
SOCIETY



[www.comsoc.org/training](http://www.comsoc.org/training)

RCCC meeting at IEEE Globecom  
7 December 2014  
Austin, Texas

Marilyn Catis, IEEE ComSoc  
Certification & Professional Education Manager



## Price Points:

- Group pricing available
- In-person pricing depends on venue
- Online:
  - 3 hr course: \$150 non-member; \$125 IEEE / ComSoc member
  - 6 hr course: \$300/\$250
  - 20 hr course: \$725/\$625
  - *Other Society Affiliates do not qualify for the member discount*

## The ComSoc Training Difference:

- Courses are ALWAYS taught live and in real-time
  - In Person
  - Online
  - Both (GLOBECOM)
- Online: Voice over PowerPoint Via WebEx
- Global participation
  - 60/40 – 50/50 mix of US/Can to Other Countries
  - Same for member/ non-member
  - Most participation is from industry & government agencies



# Employees at Companies Like ...

60+  
Countries

- Alcatel-Lucent
- AT&T
- Becker Mining Wholesale
- Bell Canada
- The Boeing Company
- Booz Allen Hamilton
- Canadian Department of Defence
- Cincinnati Bell
- Cisco Systems
- Comcel-Colombia
- DELCORA
- Digitech Communications
- DOCOMO Innovations, Inc.
- General Dynamics
- Harris Corporation
- Hydro One
- Intel Labs
- L-3 Communications
- Lawrence Livermore National Laboratory
- MIT Lincoln Laboratory
- MITRE
- Nokia, Inc.
- NYSTEC
- Olympus Communication Technology of America
- QU Wireless Innovations Center
- Savannah National River Labs
- SENTEL Corporation
- Siemens Corporation
- Sound Transit
- SPARTA, Inc.
- Stanford University
- Tahoe RF Semiconductor
- US Army
- US Department of Defense
- US Department of Energy
- US House of Representatives
- Verizon
- Weidmuller North America
- Western Digital
- Zenith

## Support WCET and ComSoc Training

## ... what they've said about it

- The instructor “***was very knowledgeable*** in the material and knew quite a few anecdotes that were valuable to the students.”  
– Frederick Demers, Government of Canada
- “***A fulfilling and well organized educational experience.***”  
– Waldon Russell
- “Keeping the ***cost low and the classes short*** makes it easier to attend more often and justify to managers.”  
– Steve Kaleta, PE
- “With all the history, technologies, and claims, ***it's good to put a complex subject in perspective.***”  
– Joe L., Canyon Applied Technologies, LLC
- “What impressed me most about the course was the ***amount of material – all current – that was distilled into a coherent one-day course.***”  
– Andris Aplocins

# ... and why they decided to buy

## Sample responses from 12/3 course on LTE

- “I would like to learn more about the main features of LTE-Advanced and the challenges they propose. ... to learn more about the path from LTE-Advanced towards 5G, the potential challenges in this advancement, and the technologies to be considered.”  
– **Amir Ali Basri, Research Engineer – Communications Research Centre Canada**
- “An introduction to the key aspects of the LTE technology including physical layer, architecture, new features offered by the technology compared with previous 4G technologies.”  
– **Mario Orbegozo, Manager, Cell Planning – Redline Communications, Inc.**
- “For a summary of the key differences between LTE and LTE-A and an industry update covering vendors, service providers, and field trial results.”  
– **Douglas Alston, IEEE WCP**
- “A better understanding of the capabilities of LTE-A, especially in terms of the services that can be built to make the LTE world more than simply a wireless transport.”  
– **Edward Branham, Principal Consultant - Verizon**

# Training Instructors



**Alan Bensky**  
MScEE, IEEE WCP,  
Electronics Engineering Consultant

Alan Bensky's fields of expertise include design of short-range receivers and transmitters, and compact antennas. He has worked on wireless location and led the development of three patents on wireless distance measurement. Alan is an accomplished author.



**Daniel Wong**  
President  
Daniel Wireless LLC  
IEEE WCP

K. Daniel Wong has over 20 years' experience in wireless communications, both in industry and academia. He helped create IEEE's WCET certification program. Daniel is a co-author and co-editor of IEEE's *Wireless Engineering Book of Knowledge* (WEBOK) as well as several other books in wireless.



**NEW INSTRUCTOR in 2014!**  
**Ray-Guang Cheng**  
Professor, National Taiwan University of Science and Technology, IEEE WCP

Ray-Guang Cheng is a Professor with the Department of Electronic and Computer Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan, and a member of IEEE WCET Industry Advisory Board. He holds 18 US patents and has published 36 3GPP/IEEE standard contributions.



**Jonathan Levine**  
Member of Technical Staff, US Cellular  
IEEE WCP

Jonathan Levine is responsible for the evolutionary architecture and functionality of the Radio Access Network (RAN). This RAN utilizes LTE, EVDO, GSM, and CDMA technologies based on both the 3GPP and 3GPP2 standards groups. He served in the USAF as a member of the 264th Combat Communications Squadron from 1999-2005.



**Vijay K. Varma**  
Senior Solution Architect, Mavenir Systems  
IEEE WCP

Vijay K. Varma has been an associate editor for *IEEE Vehicular Technology Magazine* since 2006. He was named on the "Rutberg & Co's Wireless Influencers: 2002" list. His current interests include Voice over LTE, Rich Communication Services, IP Multimedia Subsystems (IMS), and LTE/EPC architecture evolution.



**Javan Erfanian**  
Distinguished Member of Technical Staff, IEEE WCP

Javan Erfanian's recent contributions to research forums & standards bodies have focused on future wireless technologies from service environment and user interaction to next-generations of technologies, networks and operational excellence. He received the IEEE Millennium Medal in 2000.



**Lee Vishloff**  
PEng  
IEEE WCP

Lee Vishloff is the principal engineer in a wireless consultancy focused on cellular-based M2M solutions and short-range wireless products. He has over 30 years of experience in wireless systems and product design. Lee has served on numerous joint industry-academic committees during his career, strengthening the link between academic research and practical industry needs.



**Bruce Elbert**  
MSEE, MBA, President  
Application Technology Strategy, LLC

**Bruce R. Elbert**, is a recognized radio engineer and satellite communications expert, and has been involved in the satellite and telecommunications industries for over 40 years. He has written seven books on telecommunications and IT, *The Satellite Communication Ground Segment and Earth Station Handbook*, Second Edition (Artech House, 2014).

# Training Schedule (Jan- Jun 2015)

Course Title	Date	Venue
Understanding LTE-Advanced and Self-Organizing Networks	21 January	Online
5 Day Intensive Wireless Communications Engineering Intermediate Fundamentals Review & Current Practices	26-30 January	Online
The Big Picture for Small Cells	11 February	Online
<b>NEW!</b> Virtualization & Software Defined Networking	18 February	Online
VoLTE and RCS: Revolutionizing Mobile Networks	25 February	Online
<b>NEW!</b> Wireless Communications: Emphasis on Radio	4 March	Online
Wireless Positioning and Location Technologies	17 March	In-Person at IWCE in Las Vegas
5 Day Intensive Wireless Communications Engineering Intermediate Fundamentals Review & Current Practices	23-27 March	Online
Broadband Mobile Satellite Communications: Engineering High Speed Internet for Airline Passengers	1 April	Online
<b>NEW!</b> Wireless Communications: Emphasis on Wireless Network Evolution	15 April	Online
Machine-to-Machine Essentials	29 April	Online
From LTE to LTE-Advanced and Beyond	13 May	Online
Wireless Positioning and Location Technologies	27 May	Online
Virtualization & Software Defined Networking	3 June	Online

# New Course Topics

## In Development

- 5G by Ted Rappaport (Dec 2014)
- Big Data by Amarnath Gupta (2015)
- Mobility Protocols by Ashutosh Dutta (2015)
- Virtualization and Software Defined Networking (Erfanian; Feb 2015)

## New Course Topics:

- Broadband Access Standards
- Cloud Networks
- Smart Grid / Internet of Things
- Smart Grid Security – Wireless Networks
- Future Proofing Mobile Networks (Utilities)

# Opportunities for Collaboration

- In-Person Courses
  - ComSoc provides Instructor, Travel, Registration & Course Materials
  - Chapter provides venue, AV, event site coordination
  - Revenue sharing
- Online Courses
  - Group rate discounts for more than 5
- 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 2014
    - Fall 2014