

RESUME

LEON W. COUCH, II, Professor Emeritus
Electrical and Computer Engineering Department, University of Florida

ADDRESS AND PHONE NUMBERS

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PERSONAL RECORD

Date of Birth: 07/06/41
Place of Birth: Durham, N.C.
Active Member First United Methodist Church, Gainesville, FL
Amateur Radio Operator: K4GWQ, Amateur Extra Class
General Radiotelephone Operator License (previously called
First Class FCC Radiotelephone License)



EDUCATION

Duke University	Bachelor of Science EE	June 1963
Univ. of Florida	Master of Engineering(EE)	Sept. 1964
Univ. of Florida	Doctor of Philosophy(EE)	June 1968

POSITIONS HELD

05/06/04-present	Professor Emeritus EE Dept., Univ. of Florida
07/01/97-05/06/04	Professor Emeritus and Associate Chairman EE Dept., Univ. of Florida
09/01/90-06/30/97	Professor and Associate Chairman EE Dept., Univ. of Florida
09/01/87-08/31/90	Professor and Graduate Coordinator EE Dept., Univ. of Florida
09/01/84-08/31/87	Professor, EE Dept., Univ. of Florida
07/01/74-08/31/84	Associate Professor, EE Dept., Univ. of Fla.
07/01/68-06/31/74	Assistant Professor, EE Dept., Univ. of Fla.
07/01/67-06/31/68	Research Associate, EE Dept., Univ. of Fla.
09/01/63-06/31/67	Graduate Teaching Assistant, EE Dept., U. of F.
09/01/59--8/31/63	Broadcast Engineer, part time, WGBR-AM, and WEQR-FM, Goldsboro, NC, while an undergraduate at Duke University

FIELDS OF INTEREST

Wireless communication and spread spectrum systems
Telecommunication systems
Communication theory and its applications
Computers as applied to communication systems

CONSULTING

Bell Laboratories and Western Electric
Herman, Roof, Henry, and Malcolm; Attorneys, Miami, FL
Harris Corporation, Melbourne, FL
Hughes Aircraft Co., Space Comm. Div., El Segundo, CA
Tandy Corporation (Radio Shack), Ft. Worth, TX
National Technological University (Grad. EE program)
Reviewer for *IEEE Proceedings*
Reviewer for *IEEE Trans. on Aerospace and Electronic Systems*
Reviewer for *IEEE Trans. on Communications*
Reviewer for *IEEE Trans. on Signal Processing*
Reviewer for McGraw-Hill Publishing Co., New York, 1992, 1995
Reviewer for Macmillan Publishing Co., New York, 1993
Reviewer for Houghton Mifflin Co., New York, 1994
Reviewer for CRC Press, Boca Raton, FL, 1995
Reviewer for Prentice Hall, Upper Saddle River, NJ, 1995
Reviewer for John Wiley & Sons, New York, 1996

PRINCIPAL PUBLICATIONS

Books and Computer Software

L.W. Couch, II, *Digital and Analog Communication Systems*, Eighth Edition, Pearson, Upper Saddle River, NJ, 2013, 762 pages

L.W. Couch, II, *Instructor Solutions Manual for Digital and Analog Communication Systems*, Eighth Edition, Pearson., Upper Saddle River, NJ, 2013, 389 pages. Available to instructors only; download pdf files from Pearson at <http://www.pearsonhighered.com/educator/catalog/index.page>

L.W. Couch, II, *Instructor MatLab M Files for Digital and Analog Communication Systems*, Eight Edition, Pearson, Upper Saddle River, NJ, 2013. Available to instructors only; download zipped M files from Pearson at <http://www.pearsonhighered.com/educator/catalog/index.page>

L.W. Couch, II, *Student Solutions Manual for Digital and Analog Communication Systems*, Eight Edition, Pearson, Upper Saddle River, NJ, 2013, 153 pages. Download zipped pdf files from <http://lcouch.us>

L.W. Couch, II, *Student MatLab M Files for Digital and Analog Communication Systems*, Eighth Edition, Pearson, Upper Saddle River, NJ, 2013. Download zipped M files from <http://lcouch.us>

L.W. Couch, II, *Digital and Analog Communication Systems*, Seventh Edition, Pearson/Prentice Hall Inc., Upper Saddle River, NJ, 2007, 750 pages. Spanish translation published in 2008, 756

pages. Italian translation published in 2008, 634 pages. India Edition in English published in 2009. China Edition in English published in 2010. Student Solutions Manual, MatLab M files, and MathCad files available for download from <http://lcouch.us> **United States and International Editions**

L.W. Couch, II, *Instructor Solutions Manual for Digital and Analog Communication Systems*, Seventh Edition, Pearson/Prentice Hall Inc., Upper Saddle River, NJ, 2007, 392 pages. Available to instructors only; download zipped pdf files from Prentice Hall at <http://prenhall.com> **United States and International Editions**

L.W. Couch, II, *Instructor MatLab M Files for Digital and Analog Communication Systems*, Seventh Edition, Pearson/Prentice Hall Inc., Upper Saddle River, NJ, 2007. Available to instructors only; download zipped M files from Prentice Hall at <http://prenhall.com> **United States and International Edition.**

L.W. Couch, II, *Instructor MathCad Files for Digital and Analog Communication Systems*, Seventh Edition, Pearson/Prentice Hall Inc., Upper Saddle River, NJ, 2007. Available to instructors only; download zipped files from Prentice Hall at <http://prenhall.com> **United States and International Editions**

L.W. Couch, II, *Student Solutions Manual for Digital and Analog Communication Systems*, Seventh Edition, Pearson/Prentice Hall Inc., Upper Saddle River, NJ, 2007, 157 pages. Download zipped pdf files from <http://lcouch.us> **United States and International Editions**

L.W. Couch, II, *Student MatLab M Files for Digital and Analog Communication Systems*, Seventh Edition, Pearson/Prentice Hall Inc., Upper Saddle River, NJ, 2007. Download zipped M files from <http://lcouch.us> **United States and International Editions**

L.W. Couch, II, *Student MathCad Files for Digital and Analog Communication Systems*, Seventh Edition, Pearson/Prentice Hall Inc., Upper Saddle River, NJ, 2007. Download zipped files from <http://lcouch.us> **United States and International Editions**

L.W. Couch, II, Chinese Translation Edition of *Digital and Analog Communication Systems*, Sixth Edition, Prentice Hall Inc., Upper Saddle River, NJ, 2002, 597 pages.

L.W. Couch, translated by M. Luise, V. Lottici, and C. Carbonelli, *Fondamenti di Telecomunicazioni* (in Italian), Apogeo, Milano, Giugno, 2002

L.W. Couch, II, *Digital and Analog Communication Systems*, Sixth Edition, Prentice Hall Inc., Upper Saddle River, NJ, 2001, 758 pages.

L.W. Couch, II, *Solutions Manual for Digital and Analog Communication Systems*, Sixth Edition, Prentice Hall Inc., Upper Saddle River, NJ, 2001, 391 pages. Available to instructors only from Prentice Hall.

L.W. Couch, II, *Student Computer Software for Digital and Analog Communication Systems*, Sixth Edition, Prentice Hall Inc., Upper Saddle River, NJ, 2001. . Download zipped MatLab M files and zipped MathCad files from <http://lcouch.us>

L.W. Couch, II, Spanish Translation Edition of *Digital and Analog Communication Systems*, Fifth Edition, Prentice Hall Inc., Upper Saddle River, NJ, 1998, 742 pages.

L.W. Couch, II, *Digital and Analog Communication Systems*, Fifth Edition, Prentice Hall Inc., Upper Saddle River, NJ, 1997, 740 pages.

L.W. Couch, II, *Solutions Manual for Digital and Analog Communication Systems*, Fifth Edition, Prentice Hall Inc., Upper Saddle River, NJ, 1997, 391 pages. Available to instructors only from Prentice Hall.

L.W. Couch, II, *Student Computer Software for Digital and Analog Communication Systems*, Fifth Edition, Prentice Hall Inc., Upper Saddle River, NJ, 1997. Download zipped MatLab M files and zipped MathCad files from <http://lcouch.us>

L.W. Couch, II, *Modern Communication Systems: Principles and Applications*, Prentice Hall Inc., Upper Saddle River, NJ, 1995, 583 pages.

L.W. Couch, II, *Solutions Manual for Modern Communication Systems: Principles and Applications*, Prentice Hall Inc., Upper Saddle, NJ, 1995, 319 pages.

L.W. Couch, II, *Computer Software for Modern Communication Systems: Principles and Applications*, Prentice Hall Inc., Upper Saddle River, NJ, 1995. *Student Computer Software for Modern Communication Systems* available for download from <http://lcouch.us>

L.W. Couch, II, *Digital and Analog Communication Systems*, Fourth Edition, Macmillan Publishing Co., New York, 1993, 827 pages.

L.W. Couch, II, *Solutions Manual for Digital and Analog Communication Systems*, Fourth Edition, Macmillan Publishing Co., New York, 1993, 447 pages.

L.W. Couch, II, *Digital and Analog Communication Systems*, Third Edition, Macmillan Publishing Co., New York, 1990, 766 pages.

L. W. Couch, II, *Solutions Manual for Digital and Analog Communication Systems*, Third Edition, Prepared by L.W. Couch, II, L.K. Thompson and C.S. Prewitt, Macmillan Publishing Co., New York, 1990, 385 pages.

L. W. Couch, II, *Digital and Analog Communication Systems*, Second Edition, Macmillan Publishing Co., New York, 1987, 731 pages.

L. W. Couch, II, *Solutions Manual for Digital and Analog Communication Systems*, Second Edition, Prepared by L.W. Couch, II, L.K. Thompson and C.S. Prewitt, Macmillan Publishing Co., New York, 1987, 369 pages.

L. W. Couch, II, *Digital and Analog Communication Systems*, First Edition, Macmillan Publishing Co., New York, 1983, 563 pages.

L. W. Couch, II, *Solutions Manual for Digital and Analog Communication Systems*, First Edition, Prepared by L.K. Thompson and C.S. Prewitt, Macmillan Publishing Co., New York, 1983, 300 pages.

Over 150 schools are known to have adopted the first through the eighth editions of *Digital and Analog Communication Systems* by Leon W. Couch, II or have adopted *Modern Communication Systems: Principles and Applications*, by Leon W. Couch, II.

Chapters of Books

L.W. Couch, II, "Chapter 2 -- Pulse Code Modulation", *The Mobile Communications Handbook*, Third Edition, CRC Press, Boca Raton, FL, 2012, 12 pages

L.W. Couch, II, "Chapter 4 -- Complex Envelope Representations for Modulated Signals", *The Mobile Communications Handbook*, Third Edition, CRC Press, Boca Raton, FL, 2012, 16 pages.

L.W. Couch, II, "Chapter -- Intelligence Coding," *The Electronics Handbook*, Second Edition, CRC Press, Boca Raton, FL, 2005.

L.W. Couch, II, "Chapter 142 -- Complex Envelope Representations for Modulated Signals", *The Engineering Handbook*, Second Edition, CRC Press, Boca Raton, FL, 2004, pp. 142-1 through 142-14.

S.L. Miller and L.W. Couch, II, "Chapter 136 --Coding", *The Engineering Handbook*, Second Edition, CRC Press, Boca Raton, FL, 2004, pp. 136-1 through 136-8.

L.W. Couch, II, "Chapter 1 -- Complex Envelope Representations for Modulated Signals", *The Communications Handbook*, Second Edition, CRC Press, Boca Raton, FL, 2002, 13 pages.

L.W. Couch, II, "Chapter 3 -- Pulse Code Modulation", *The Communications Handbook*, Second Edition, CRC Press, Boca Raton, FL, 2002, 13 pages.

L. W. Couch, II, and W. J. Weisz, "Radio Spectrum Utilization" for Vol. 13, *Encyclopedia of Physical Science & Technology*, Third Edition, Academic Press, San Diego, CA, 2002, pp 793-805.

L.W. Couch, II, "Chapter 1 -- Complex Envelope Representations for Modulated Signals", *The Mobile Communications Handbook*, Second Edition, CRC Press, Boca Raton, FL, 1999, 15 pages.

L.W. Couch, II, "Chapter 3 -- Pulse Code Modulation", *The Mobile Communications Handbook*, Second Edition, CRC Press, Boca Raton, FL, 1999, 13 pages

L.W. Couch, II, "Chapter 3 -- Pulse Code Modulation", *The Communications Handbook*, CRC Press, Boca Raton, FL, 1997, pp. 23-34.

L.W. Couch, II, "Chapter 76 -- Intelligence Coding," *The Electronics Handbook*, CRC Press, Boca Raton, FL, 1996, pp. 1161-1174.

L.W. Couch, II, "Chapter 3 -- Pulse Code Modulation", *The Mobile Communications Handbook*, CRC Press, Boca Raton, FL, 1996, pp. 23-34.

S.L. Miller and L.W. Couch, II, "Chapter 127 --Coding", *The Engineering Handbook*, CRC Press, Boca Raton, FL, 1995, pp. 1378-1387.

Reviewed Papers

C. S. Chuang and L. W. Couch, "The design of narrow beamwidth asymmetric sidelobe array antenna patterns using analytic signal concept", *IEEE Transactions on Antennas and Propagation*, vol. 39, October 1991, pp. 1530-1532.

L. W. Couch and C. V. Shaffer, "Development of a computer communications course plus laboratory", *ASEE Journal on Computers in Education*, Fall 1985.

L. W. Couch, "Performance of DS spread spectrum systems", *IEEE Proceedings*, February 1980, pp. 298-300.

C. D. Leitch, and L. W. Couch, "Automatic nonduplication protection using an audio envelope correlator", *IEEE Trans. on Cable Television*, vol. CATV-2, January 1977, pp. 5-17.

B. M. Mattox and L. W. Couch, "Synthesis of short range FM radars using generalized modulations", *IEEE Trans. on Communications*, vol. COM-24, January 1976, pp. 11-19.

L. W. Couch, M. C. Bartlett, and R. C. Johnson, "Ambiguity function simulator", *IEEE Proceedings*, Nov. 1975, pp. 1625-1627.

L. W. Couch, "Effects of modulation nonlinearity on the range response of FM radars", *IEEE Trans. on Aerospace and Electronic Systems*, vol. AES-9, July 1973.

L. W. Couch, "Properties of a class of signaling waveforms for digital phase modulation", *IEEE Trans. on Communication Technology*, vol. COM-19, December 1971, pp. 1252-1259.

L. W. Couch, "A study of a driven oscillator with FM feedback by use of a phase-lock-loop model", *IEEE Trans. on Microwave Theory and Techniques*, vol. MTT-19, April 1971, pp. 357-366.

L. W. Couch and R. C. Johnson, "A relationship between beat waveforms of a driven oscillator", *Proc. of IEEE*, vol. 58, May 1970, pp. 812-814.

L. W. Couch, "Signal-to-noise ratio out of an ideal FM detector for SSB-FM plus Gaussian noise at the input", *IEEE Trans. on Communication Technology*, vol. COM-17, Oct. 1969, pp. 591-592.

Conference Papers

S. Kim and L. W. Couch, "Digital Single Side Band with Pilot Symbol Assisted Modulation in Mobile Radio Channels", *RAWCON98 1998 IEEE Radio and Wireless Conference*, August 1998.

L. W. Couch and C. V. Shaffer, "Development of a computer communications course plus laboratory", *IEEE SOUTHEASTCON'84 Proceedings*, April 1984.

L. W. Couch, "A new technique for teaching communication theory by use of the complex envelope concept", *IEEE SOUTHEASTCON'83 Proceedings*, April 1983.

J. L. Walker and L. W. Couch, "A VHF LINK Amplifier", *IEEE SOUTHEASTCON'82*, April 1982.

L. W. Couch, "Bandwidth requirements of balanced modulators that are driven by nonlinear circuits for generation of angle modulated signals", *IEEE SOUTHEASTCON'77 Proceedings*, April 1977.

L. W. Couch, "Range performance of FM radars with coherent harmonic processing", *IEEE Southeastern 74 Conference Record*, May 1974.

STUDENTS

Taught Digital and Analog Communication Systems to thousands of undergraduate students and supervised the work of 5 PhD students, 19 Thesis Masters students and 70 Non-thesis Masters students.

TEACHING

Taught both graduate and undergraduate courses. Courses taught are: Comm. Systems and Components (EEL 4514), Noise in Comm. Systems (EEL 4516), Comm. Lab. (EEL4514L), Noise in Linear Systems (EEL5544), Radar (EEL5547), Computer Communications (EEL5718), Signal Design and Spread Spectrum (EEL 6503), Space Communications (EEL6509), Decision Theory (EEL6524), and Communications (EEL6535).

SOCIETIES AND PROFESSIONAL MEMBERSHIPS

Tau Beta Pi, Member since 1963

Eta Kappa Nu, Member since 1964

Sigma Xi, Member since 1972

IEEE, Life Senior Member since 2007, Senior Member since 1984, Member since 1963

IEEE, Gainesville Section Chairman 1976

American Society for Engineering Education, Member since 1981

HONORS & AWARDS

U of F, Outstanding EE Core Course Instructor 1977-78

U of F, Outstanding EE Laboratory Supervisor 1977-78

IEEE Outstanding Student Branch Counselor 1980 (National Award)

IEEE Centennial Medal 1984

U of F, Outstanding Undergraduate Research Project Supervisor 1984

U of F, Outstanding Master's Thesis Supervisor 1984

U of F, Outstanding Master's Thesis Supervisor 1985

ASEE Merl K. Miller Award for outstanding paper 1985

Supervisor of Outstanding Undergraduate Design Project 1988
U of F, Outstanding EE Laboratory Supervisor 1992
U of F, Outstanding Ph.D. Dissertation Supervisor 1992
U of F, Winner of TIP (Teacher Incentive Program) Award, 1995
U of F, Inducted into the ECE Academy, 2009

OTHER SERVICE AND ASSIGNED DUTIES

Boy Scout Merit Badge Camporee at UF, Instructor, 1995 & 96
College of Engineering Undergraduate Fellowship Committee, 1988-97
EE Dept. ABET Accreditation Committee, Chair 94-95, Chair 2000-01
EE Dept. Associate Chairman, 1990-2004
EE Dept. Chair of various search committees, 1990-99
EE Dept. Curriculum Committee, 1980, 81, 87, 1990-2004
EE Dept. Graduate Committee, 1982, 83; Chairman 84-89; 1990-2004
EE Dept. Graduate Coordinator, 1987-90
EE Dept. Laboratory Committee member, 1979-83; Chairman, 80
EE Dept. Undergraduate Scholarship Comm., 1985, Chair 86, 87
Fla. EE Lower-division Course Prerequisite Selection Committee, 1997-2004
Fla. Governor's High-Tech Panel on Telecommunications, 1984-86
Fla. State Science Fair, Judge for Engineering Section, 1998, 1999, 2000, 2002, 2003
Gator Amateur Radio Club (W4DFU), Faculty Adv., 1973-2004
National Technological Univ., Member EE Committee, 1985-90
UF Commencement Marshal, 1978-79
UF Friends of Music, Board of Directors, 1996-2001
UF IEEE Student Branch, Faculty Advisor, 1974-87; A "top-ten" branch 1978-82
UF Minority Mentor Program, 1993-95
UF Senate member, 1981-82, 1984-86, 92-94
UF Sigma Xi Membership Committee, 1984-86
UF Sponsored Research Conflict of Interest Committee, 1991-92