

iNEER Award Nomination Dossier

Nominator Information:

Name: Juh Wah Chen
Title: Dean Emeritus
Affiliation: Southern Illinois University Carbondale
Address: 1063 Wood Road, Murphysboro, IL 62966
Email address: hanlinchen@aol.com
Telephone: 618-549-3260
Fax: 618-453-8216

Nominee Information:

Name: Che-Ho Wei
Title: Professor
Affiliation: National Chiao Tung University
Address: Dept. of Electronics Engineering and Institute of Electronics, Engineering Building IV, Room541, National Chiao Tung University, 300 Hsinchu, Taiwan, ROC.
Email address: chwei@mail.nctu.edu.tw
Telephone: 011-886-03-5728386
Fax: 011-886-03-5734942

Category of Award: Leadership Award

Suggested Citation (15 words or less): In recognizing Professor Che-Ho Wei for his Leadership and Contribution to Promote International Engineering Education Reform and Accreditation.

Will Nominee Be Present at Awards Ceremony?: Yes

Summary of Accomplishments:



Wei, Che-Ho was born in Taiwan. He received the B.S. and M.S. degrees in Electronic Engineering from National Chiao Tung University, Hsinchu, Taiwan, ROC, in 1968 and 1970, respectively, and the Ph.D. degree in Electrical Engineering from the University of Washington, Seattle, in 1976.

From 1976 to 1979, he was an associate professor at National Chiao Tung University. During 1979 to 1982, he was the engineering manager of Wang Industrial Company in Taipei. He was professor and Chairman of the Department of Electronics Engineering of NCTU from 1982 to 1986, and Director of Institute of Electronics from 1984 to 1989. He was on leave at the Ministry of Education and served as the Director of Advisory Office from September 1990 to July 1992. He served as Dean of Research of NCTU from August 1993 to July 1995, and Dean of College of Electrical Engineering and Computer Science from August 1995 to July 1998, Vice President of the university from Oct.1998 to Feb.2001. He was appointed as the Chairman of National Science Council, ROC from March 2002 to May 2004. He is now a chair professor emeritus of NCTU.

Dr. Wei was the founding chairman of Taipei Chapter of IEEE Circuits and Systems Society and IEEE Communication Society. He served as a member of Board of Governors, IEEE Circuits and Systems Society, 1992-1994. He was an associate editor of IEEE Transaction on Circuits and Systems for Video Technology from 1995 to 1997. He received the Distinguished Research Award in 1990 to 1996 from the National Science Council, ROC. He also received the distinguished engineering professor award from the Chinese Institute of Engineers in 1995. Dr. Wei was elected as an IEEE Fellow (1996) for his contributions to circuits and systems for communications and signal processing. He received the Academic Achievement Award from the Ministry of Education, ROC in 2000. He was the recipient of the IEEE Third Millennium Medal and IEEE Circuits and Systems Society Golden Jubilee Medal, 2000. His research interests include digital communications and signal processing, and related circuit design. He is now serving as the president of Institute of Engineering Education Taiwan (IEET).

Include Letters of Support Here



December 20, 2004

Memo To: INEER Leadership Award Nomination Committee

From: Juh Wah Chen
Dean Emeritus, Southern Illinois University Carbondale
2004 INEER Leadership Award Recipient

RE: Nomination of Dr. Che-Ho Wei, Professor

It gives me great please to nominate Dr. Che-Ho Wei, professor, for the Leadership Award at the ICEER conference to be held in Tainan, Taiwan, R.O.C. from March 1 to March 5, 2005.

Dr. Wei received his Ph.D. from the University of Washington in 1976 and returned to Taiwan immediately, starting a distinguished career in engineering education and research. Dr. Wei began his teaching at National Chiao Tung University as an associate professor, moved up rapidly through the ranks to full professor, department chair, institute director, and became Dean of the College of Electrical Engineering and Computer Science in 1995. He served as Vice President of National Chiao Tung University between 1998 and February 2001. He was appointed as chairman of the National Science Council, R.O.C., a cabinet level position, by the government in 2002. Under his leadership, the National Science Council made a large impact on engineering education, advanced research and international cooperation.

Professor Che-Ho Wei has been very active in professional and technical organizations. He is a fellow of IEEE, served an associate editor of IEEE Transaction from 1995 to 1997. He was the recipient of the IEEE Third millennium Medal, and the Circuit and Systems Society Golden Jubilee Medal. Most recently, he received the academic Achievement Award from the Ministry of Education, R.O.C., which is the highest honor for an engineering educator in Taiwan. Dr. Che-Ho Wei is currently serving as Chair Professor Emeritus, National Chiao Tung University, and President of the Institute of Engineering Education, Tainan, R.O.C.

Professor Wei is a strong and active supporter of ICEE and INEER. He has participated in most ICEE and ICEER conferences since 1997. He was the General Chair of the ICEE conference in Taiwan in 2000. He served as Chairman of the INEER Steering Committee and hosted the committee meeting in 2002. Again, he is serving as Chair of the Planning Committee for next year's ICEER conference in Tainan. Dr. Wei is a role model for engineering educators and

researchers. His leadership has been consistent with his works and actions, which sets a good example for many of us. Dr. Wei encourages people for advancement and forward moving. He always moves along with them. He is a natural leader who earns people's trust and respect.

With Professor Che-Ho Wei's achievements, reputation, and his contributions to INEER, I respectfully submit his name as recipient for the Leadership Award.



SOUTHERN ILLINOIS UNIVERSITY
CARBONDALE

Emeritus Status

December 20, 2004

Memo To: INEER Leadership Award Nomination Committee

From: Benjamin A. Shepherd
Professor Emeritus – Zoology
Former Provost: 1988 - 1996

RE: Dr. Che-Ho Wei

It gives me great pleasure to nominate Dr. Che-Ho Wei, professor, for the 2005 INEER Leadership Award at the ICEER conference to be held in Tainan, Taiwan, R.O.C. Dr. Wei began his teaching at National Chiao Tung University as an associate professor, moved up rapidly through the ranks to full professor, department chair, institute director, and became Dean of the College of Electrical Engineering and Computer Science in 1995. He served as Vice President of National Chiao Tung University between 1998 and February 2001. He was appointed as chairman of the National Science Council, R.O.C., a cabinet level position, by the government in 2002. Under his leadership, the National Science Council made a large impact on engineering education, advanced research and international cooperation.

I came to know Dr. Wei when Southern Illinois University Carbondale sponsored the 1997 International Conference on Engineering Education (ICEE) at Chicago in August 1997, at which time Professor Wei led a delegation of engineering professors from Taiwan to attend the conference. Professor Wei and his colleagues came to learn the engineering education reform and engineering accreditation process in the United States and other parts of the world. Since 1998, Professor Wei has actively supported ICEE and INEER and has personally led a delegation of engineering professors and education staff, and provided them financial support to attend the ICEE conference every year. In addition, he has brought to Taiwan many experts from the US, Europe, and Asia to give workshops and training sessions to further introduce the concept of engineering education and accreditation. Undoubtedly, these efforts are to bring the international prospective on engineering education and engineering accreditation to the engineering education community in Taiwan. In 2000, under Professor Weir's leadership, the engineering community in Taiwan organized an ICEE conference in Taipei and Tainan. This conference was a very successful event and it put Taiwan as a leader among the nations promoting global engineering education reform.

The activities mentioned above were meant to bring action and produce impact at home. In doing so, Professor Wei has established a working group of volunteers to work on the elements of engineering accreditation process. And in the meantime, he continues promoting the concept of international engineering accreditation in Taiwan. This effort has received overwhelming support from academia and from government agencies such as the Ministry of Education and the National Science Council. His vision and effort has become one of the nation's top priorities. Just recently, under Professor Wei's leadership, the Institute of Engineering Education Taiwan (IEET) aiming at coordinating the engineering accreditation process for the universities was established.

I should point out that Professor Che-Ho Wei has successfully brought to Taiwan the concept of engineering education accreditation and has promoted the engineering education community in Taiwan toward the international arena. Also, he has provided leadership and resources to the ICEE and INEER community. This role has provided INEER the necessary momentum to grow to become an internationally recognized advocating agent for excellence in engineering education and accreditation. He is truly a role model for engineering educators worldwide.

With Professor Che-Ho Wei's achievements, reputation, and his contributions to INEER, I respectfully nominate him as a most deserving recipient of the Leadership Award.

February 2, 2005

To Whom It May Concern,

I am writing to support the nomination of Dr. Che-Ho Wei for the Leadership Award for his Extraordinary Leadership and Accomplishments in Development of Science and Technology and Engineering Education.

Dr. Wei has devoted thirty years of his career as an educator and a public servant, and his accomplishments are best characterized by his profound leadership in the development of science and technology and engineering education in Taiwan. A researcher and an academic at heart, Dr. Wei has been called on to play many important leadership roles throughout his career that include department chair, dean of engineering college, university vice president, director of the Advisory Office of the Ministry of Education, and most recently the Chairman of the National Science Council (NSC), the highest government agency responsible for promoting the development of science and technology. Taiwan's development in engineering education and science and technology has achieved great strides under his leadership. After he stepped down from his position at NSC, he has been a national policies advisor to the President of Taiwan.

In addition, Dr. Wei is a very active member of several professional societies; he has led the effort to found chapters of two IEEE societies in Taiwan. Currently, he is serving as the President of Institute of Engineering Education Taiwan (IEET), a non-government organization developing and promoting accreditation of engineering programs in Taiwan. During his thirty years in career, he has received numerous domestic and international prestigious awards, such as the IEEE Fellow

Dr. Wei has shown exemplar leadership throughout his career. I, therefore, support the nomination of Dr. Wei for the Leadership Award for the Extraordinary Leadership and Accomplishments in Development of Science and Technology and Engineering Education.

Sincerely,

Shan-Hwei Ou
Professor and Vice President
National Cheng Kung University, Tainan, Taiwan



- **Last Name** : Wei
- **First Name** : Che-Ho
- **Present Occupations** :
 - **Chair Professor Emeritus**
Department of Electronics Engineering and Institute of Electronics
National Chiao Tung University.
 - **President**
Institute of Engineering Education Taiwan (IEET)
- **Office** :
 - Address :
Dept. of Electronics Engineering and Institute of Electronics, Engineering
Building IV, Room541, National Chiao Tung University, 300 Hsinchu, Taiwan,
ROC.
 - Room : ED541
TEL : 03-5712121 Ext.54152
- **Education** :
 - Ph. D, Electronic Engineering, University of Washington, Seattle, WA, USA, 1976
 - M. S., Electronic Engineering, National Chiao Tung University, Hsinchu, Taiwan, ROC, 1970
 - B. S., Electronic Engineering, National Chiao Tung University, Hsinchu, Taiwan, ROC, 1968
- **Professional Affiliation** :
 - Chairman, IEEE Taipei Section, 1992-1994.
 - Member, Board of Governors, IEEE Circuits and Systems Society, 1992-1994.
 - Chairman, IEEE Circuits and Systems Taipei Chapter, 1988-1990.
 - Senior member, IEEE 1987-present.
 - Member, Chinese Institute of Engineers.
 - Member, Chinese Institute of Electrical Engineers.
 - Director of Science and Technology Advisory Office, Ministry of Education, Taiwan, R.O.C., 1990-1992.
 - Member, Board of Directors, Chinese Institute of Electrical Engineering, 1995-1996.
 - Chairman, Technical Activities Committee, Chinese Institute of Electrical Engineering, 1992.
 - Editor in Electronics area, Journal of Chinese Institute of Engineers, 1992.

- **Professional Positions** :

03/2002-05/2004	Chairman National Science Council, Executive Yuan, ROC
10/1998-present	Vice President National Chiao Tung University
8/1982-present	Professor Department of Electronics Engineering and Institute of Electronics National Chiao Tung University
8/1995-9/1998	Dean College of Electrical Engineering and Computer Science

	National Chiao Tung University
8/1993-7/1995	Dean Research and Development National Chiao Tung University
8/1984-7/1989	Director Institute of Electronics National Chiao Tung University
8/1982-7/1986	Chairman Department of Electronics Engineering National Chiao Tung University
8/1976-7/1979	Associate Professor Department of Electronics Engineering and Institute of Electronics National Chiao Tung University
7/1973-1/1976	Research assistant of Professor John L. Bjorkstam at University of Washington working on nuclear magnetic resonance for study of atomic motion in solids.
1/1973-6/1973	Teaching assistant Department of Electronics Engineering University of Washington
9/1971-1/1973	Research assistant of Professor Sinclair S. Yee at University of Washington working on II-VI compound electroluminescence devices.

- **Industrial Experience :**

8/1979-7/1982	Country manager of customer engineering Wang Industrial Company, Taipei, (A subsidiary of Wang Laboratories, Mass, USA)
---------------	---

- **Conference Activities :**

- **Member, Technical Program Committee**
IEEE ISCAS'93, Chicago, May, 1993.
IEEE ISCAS'91, Singapore, June 10-11, 1991.
IEEE Region 10 Conference, Hong Kong, Sep., 1990.
IEEE ISCAS'89, Portland, Oregon, May, 1989.
IEEE ISCAS'88, Espoo, Finland, June 7-9, 1988.
- **Chairman, Technical Program Committee**
1987&1988 National Telecommunications Symposium, Taiwan, R.O.C.
- **Co-Chair, Technical Program Committee**
1994 IEEE Asia-Pacific Conference on Circuits and Systems, Taipei, Taiwan, R.O.C.,
Dec. 8-10, 1994
1993 International Symposium on Communications, Taiwan, R.O.C., Dec. 7-10, 1993.
1991 IEEE Workshop on Visual Signal Processing and Communications, Taiwan,
R.O.C., June 7-8, 1991.
- **General Chairman**
1993 HD-MEDIA Technology and Application Workshop, Taipei, Taiwan, R.O.C., Oct.
8-9, 1993

- **Other Academic/Technical Activities :**

- Co-principal Investigator, National Telecommunication Program, Taiwan, R.O.C., 1998-present.
- Coordinator in Wireless Communications Research, National Science Council, Taiwan, R.O.C., 1994-1996.
- Coordinator in Electrical Engineering Research, National Science Council, Taiwan, R.O.C., 1989-1992.

- **Journal Papers:**

1. T.-C. Chen, C.-H. Wei, and S.-W. Wei, "A Pipeline Structure for High-Speed Step-by-Step RS Decoding" IEICE Transactions on Communications, Vol. E86-B, No. 2, pp. 850-853, Feb. 2003.
2. J.-M. Chen and C.-H. Wei, "A High-Throughput VLSI Architecture for LZFG Data Compression" IEICE Trans. On Information and Systems, Vol. E85-D, No. 3, March 2002, pp.497-509.
3. S.-T. Lin and C.-H. Wei, "Precursor ISI-Free Frame Synchronization for DMT VDSL System" IEICE Trans. Communications, Vol. E-85-B, No. 8, August 2002, pp. 1447-1454.
4. Der-Zheng Liu and Che-Ho Wei, "Channel Estimation and Compensation for Preamble-Assisted DAPSK Transmission in Digital Mobile Radio System," to appear in IEEE Trans. on Vehicular Technology, 2001.
5. H.-C. Hwang and C.-H. Wei, "A New Blind Adaptive Interference Suppression Scheme for Joint Acquisition and MMSE Demodulation of DS/CDMA Signals", IEEE Trans. on Vehicular Technology, Vol. 49, No.3, pp.875-884, May 2000.
6. T.-C. Chen, C.-H. Wei and S.-W. Wei, "Step-by-Step Decoding Algorithm for Reed-Solomon Codes", IEE Proc. Communi., Vol.147, No.1, pp.8-12, Feb. 2000.
7. C.-H. Chang, S. Siu and C.-H. Wei, "Complex Backpropagation Decision Feedback Equalizer with Decision Using Neural Nets", J. of Chinese of Electrical Engineering, Vol. 7, No.1, pp.63-69, Feb. 2000.
8. C.-H. Su, H.-M. Hang and C.-H. Wei, "Robust Transform Image Coder over Noisy Channel", Electronics Letters, Vol.36, No.4, pp.31-32, Feb. 2000.
9. J.-M. Chen and C.-H. Wei, "A High-Speed Systolic Array Architecture for LZSS Data Compression System", J. of Chinese of Electrical Engineering, Vol. 6, No.4, pp.271-284, Nov. 1999.
10. H.-C. Hwang and C.-H. Wei, "Adaptive Variable Step-Size Griffith's Algorithm for Blind Demodulation of DS/CDMA Signals", IEICE Tran. Commun., Vol.E82-B No.10, pp.1643-1650, Oct. 1999.
11. J.-M. Chen and C.-H. Wei, "VLSI Design for High-Speed LZ-based Data Compression", IEE Proc. Circuits Devices Systems, Vol.146, No.5, pp.268-278, Oct. 1999.
12. M.-H. Hsieh and C.-H. Wei, "A Low-Complexity Frame Synchronisation and Frequency Offset Compensation Scheme for OFDM Systems over Fading Channels" IEEE Trans. Vehicular Technology, vol.48, No.5, Sep. 1999, pp.1596-1609.
13. H.-C. Hwang and C.-H. Wei, "Blind adaptive algorithm for demodulation of DS/CDMA signals with mismatch" IEE Proc.-Commun. vol.146 No.1, pp.29-34, Feb. 1999.
14. M.-H. Hsieh and C.-H. Wei, "Channel Estimation for OFDM Systems Based on Comb-Type Pilot Arrangement in Frequency Selective Fading Channels," IEEE Trans. Consumer Electronics, Vol.44, No.1, pp.217-225, Feb. 1999.
15. M.-H. Hsieh and C.-H. Wei, "An Adaptive Multialphabet Arithmetic Coding for Video Compression," IEEE Trans. Circuits and Systems for Video Technology, vol.8, no.2, pp.130-137, April, 1998.

16. S.-W. Wei, S.-T. Leu and C.-H. Wei, "Transmission Capability of Discrete Multitone Modulation for Taiwan's Subscriber Loops," *Int. Journal of Communication Systems*, vol. 9, pp. 47-57, 1996.
17. G.-S. Liu and C.-H. Wei, "Quadrilevel Periodic Sequences for Fast Start-Up Equalization and Channel Estimation", *IEEE Trans. Commun.*, Vol.44, No.2, Feb. 1996.
18. G.-S. Liu and C.-H. Wei, "Analysis of Adaptive LMS Estimator with Cyclic Sequences in Complex Frequency Domain", *IEEE Trans. Circuits and Systems*, Vol.42, No.12, pp. , Dec. 1995.
19. H.-C. Kuo and C.-H. Wei, "Multiple-Inputs Systolic Priority Queue for Fast Sequential Decoding of Convolutional Codes", *IEE Proc. Circuits Devices Syst.*, Vol.142, No.5, pp.282-292, Oct. 1995.
20. S. Siu, C.-H. Chang and C.-H. Wei, "Lp Norm Back Propagation Algorithm for Adaptive Equalization", *IEEE Trans. Circuits and Systems*, Pt.II, Vol.42, No.9, pp. 604-607, Sep. 1995.
21. J.-Y. Lin and C.-H. Wei, "Adaptive Nonlinear Decision Feedback Equalization with Channel Estimation and Timing Recovery in Digital Magnetic Recording Systems", *IEEE Trans. Circuits and Systems*, Pt.II, Vol.42, No.3, pp.**, March 1995.
22. J.-Y. Lin and C.-H. Wei, "Fast Timing Recovery Scheme for Class IV Partial Response Channels", *Electronics Letter*, Vol.31, No.3, pp.159-161, Feb. 1995.
23. C.-H. Chang, S. Siu and C.-H. Wei, "On the Convergence of the Lp-Norm Algorithm for Polynomial Perceptron Having Different Error Signal Distributions", *Journal of Chinese Institute of Engineers*, Vol.18, No.2, pp.293-302, 1995.
24. C.-H. Chang, S. Siu and C.-H. Wei, "A Polynomial-perceptron Based Decision Feedback Equalizer with a Robust Learning Algorithm", *Signal Processing* 47, No.** , pp.** , 1995.
25. C.-H. Wei and W.-J. Chen, "Digital Tanlock Loop for Tracking $\pi/4$ - QPSK Signals in Digital Cellular Radio", *IEEE Trans. Vehicular Technology*, Vol.43, No.3, pp.474-479, Aug. 1994.
26. H.-C. Kuo and C.-H. Wei, "Sequential Decoding of Convolutional Codes by a Compressed Multiple Queue Algorithm", *IEE Proc. Pt. I, Communications*, Vol.141, No.4, pp.212-222, Aug. 1994.
27. S.-W. Wei and C.-H. Wei, "High Speed Decoder of Reed-Solomon Codes", *IEEE Trans. Communications*, Vol.41, No.11, pp.1588-1593, Nov. 1993.
28. G.-S. Liu and C.-H. Wei, "Multipath fading effects on carrier recovery of BPSK signal in digital radio", *IEEE Proc. Pt.(1993) Vol.140*, No.5, pp.381-388, Oct. 1993.
29. C.-H. Wei, C.-C. Chen and G.-S. Liu, "High-Speed Reed-Solomon Decoder for Correcting Errors and Erasures", *IEE Proc. Pt.I*, Vol.140, No.4, pp.246-254, Aug. 1993.
30. S.-W. Wei and C.-H. Wei, 1993, " A High-Speed Real-Time Binary BCH Decoder " *IEEE Trans. Circuits and Systems for Video Technology*, Vol.3, No.2, pp.138-147.
31. G.-S. Liu and C.-H. Wei, 1992, " A New Variable Fractional Sample Delay Filter with Nonlinear Interpolation " *IEEE Trans. on Circuits and Systems PtII:Analog and Digital Signal Processing*, Vol.39, No.3, pp.123-126.
32. J.-A. Guu and C.-H. Wei, 1992, " Maneuvering Target Tracking in the Presence of Complicated Measurement Noises " *Journal of the Chinese Institute of Engineers*, Vol.15, No.6, pp.559-570.
33. J.-A. Guu and C.-H. Wei, 1992, " Tracking a Maneuvering Target Using Input Estimation at High Measurement Frequency ", *Int.J. System Science*, Vol.23, No.6, pp.871-883.
34. C.-H. Wei, S.-Y. Koog and J.-H.Huang, 1991, " Timing Recovery in ISDN U-Interface with 2B1Q Line Code " *Journal of the Chinese Institute of Engineers*, Vol.14, No.4, pp.349-357.
35. G.-A. Guu and C.-H. Wei, 1991," Tracking Technique for Manoeuvring Target with Correlated Measurement Noise and Unknown Parameters " *IEE Proc. Pt.F (Radar and Signal Processing)*, Vol.27, No.3, pp.278-288.

36. G.-A. Guu and C.-H. Wei, 1991, " Tracking a Maneuvering Target Using Interacting Multiple Model Method at High Measurement Frequency " IEEE Trans. Aerospace and Electronics Systems, Vol.27, No.3, pp.514-519.
37. G.-A. Guu and C.-H. Wei, 1991, " Tracking a manoeuvring target with correlated measurement noises by manoeuvring detection method " Electronics Lett., Vol.27, No.3, pp.265-267.
38. S.-W. Wei, C.-H. Wei and L.-S. Wang, 1990, " An Implementation of High-Speed Decoder for Double-Error-Correcting Binary BCH Codes in Programmable Logic Array Chip " Journal of the Chinese Institute of Engineers, Vol.13, No.6, pp.665-672.
39. G.-S. Liu and C.-H. Wei, 1990, " Programmable Fractional Sample Delay Filter with Lagrange Interpolation ", Electronics Letters, Vol.26, No.19, pp.1608-1610.
40. S.-W. Wei and C.-H. Wei, 1990, " On high-Speed Decoding of (23,12,7) Golay Code." IEEE Trans. Information Theory, Vol.IT-36, No.3, pp.692-695.
41. Y.-L. Chen and C.-H. Wei, 1990, " On the Performance of Rate 1/2 Convolutional Codes with QPSK on Rician Fading Channel " IEEE Trans. Vehicular Technology, Vol.VT-39, No.2, pp.161-170.
42. J.-A. Guu and C.-H. Wei, 1990, " Simple Parameter Estimation Technique in Maneuvering Target Tracking Systems ", Electronics Letters, Vol.26, No.8, pp.508-509.
43. S.-W. Wei and C.-H. Wei, 1989, " Complete Decoding Algorithm of (11,6,5) Golay Code ", Electronics Letters, Vol.25, No.17, pp.1191-1192.
44. S.-W. Wei and C.-H. Wei, 1989, " High-speed Hardware Decoder for Double-Error Correcting Binary BCH Codes " IEE Proceedings, Vol.136, Pt.I, No.3, pp.227-231.
45. C.-L. Wang, C.-H. Wei and S.-H. Chen, 1988, " Efficient Bit-level Systolic Array Implementation of FIR and Digital Filters," IEEE J. Select Areas Commun. Vol.SAC-6, PP.484-493.
46. C.-H. Wei and N.-A. Kuo, 1988, " On the Implementation of Adaptive Electronic Hybrid for Digital Subscriber Loops " IEEE Trans. Circuits Syst. Vol.CAS-35, No.8, pp.1024-1027.
47. C.-L. Wang, C.-H. Wei and S.-H. Chen, 1987, " Efficient bit level systolic array for the linear discriminant function classifier " IEE Proc., Vol.134, Pt.G, No.5, pp.216-224.
48. Y.-L. Chen and C.-H. Wei, 1987, " Performance Evaluation of Convolutional Codes With MPSK on Rician Fading Channels " IEE Proc., Vol.134, Pt.F, No.2, pp.166-173.
49. Y.-Y. Chiu and C.-H. Wei, 1987, " On the Realization of Multimemory Block Structure Digital Adaptive Filter Using Distributed Arithmetic," Journal of the Chinese Institute of Engineers, Vol.10, No.1, pp.115-112.
50. Y.-L. Chen and C.-H. Wei, 1986, " Convolutional Coding for BPSK System With Orthogonal Sounding Tone On Fast Rayleigh Fading Channel," Electronics Letters, Vol.22, No.24, pp.1277-1278.
51. Y.-L. Chen and C.-H. Wei, 1986, " Performance Bounds of Rate 1/2 Convolutional Codes With QPSK on Rayleigh Fading Channel," Electronics Letters, 14th Vol.22, No.17, pp.915-917.
52. C.-H. Wei, 1986, " An Alternative Approach for Designing Maximally Flat Low-pass Filters with Multiple Order Imaginary-Axis Zeros " IEEE Trans. Circuits Syst., Vol.CAS-33, No.6, pp.642-644.
53. C.-H. Wei and J.-J. Lou, 1986, " Multimemory Block Structure for Implementing a Digital Adaptive Filter Using Distributed Arithmetic " IEE Proc. Pt.G, No.1, pp.19-26.
54. C.-L. Wang, C.-H. Wei and S.-H. Chen, 1986, " Improved Systolic for Linear Discriminant Function Classifier," Electronics Letters, 16th Vol.22, No.2, pp.85-86.
55. C.-L. Wang, C.-H. Wei and S.-H. Chen, 1985, " Systolic Encoder for Fast Waveform Vector Quantization" Electronics Letters, 1st Vol.21, No.16, pp.682-684.
56. C.-H. Wei, 1980, " Design of Sharp Cutoff Low-Maximally Flat RC-Active Filters by Cascading Third-order Blocks" IEEE Trans. Circuits Syst., Vol.CAS-27, pp.411-413.

57. C.-H. Wei, 1979, " Low-pass Filters with Near-Maximally Flat Passband" Journal of the Chinese Institute of Engineers, Vol.2, No.2, pp.129-134.
58. J. L. Bjorkstam and C.-H. Wei, 1974, " Analysis of Critical Nuclear Magnetic Relaxation in KDP-type Ferroelectricity " Ferroelectrics, Vol.7, pp.127-128.
59. C.-H. Wei and S.-S. Yee, 1974, " Comments on Dependence of Barrier Height of Metal-Semiconductor Contact (Au-CaAs) in thickness of Semiconductor Surface Layer " J. of Applied Physics Vol.45, No.2, pp.971.

- **Conference Papers:**

1. T.-C. Chen, C.-H. Wei , and S.-W. Wei, "Step-by-step error/erasure decoding Reed-Solomon codes", Proceedings of 8th IEEE International Conference on Communication Systems, pp. 321-325, November 25-28, 2002.
2. C.-H. Tang and C.-H. Wei, "Pilot-Channel Aided Pipeline Scheme for Interference Cancellation in Uplink DS/CDMA System" 2002 IEEE 56th Vehicular Technology Conference, 24-28 September 2002, Vancouver, Canada, Vol.4, pp. 2361-2365.
3. C.-H. Tang, W.-Y. Chang and C.-H. Wei, "Pilot Channel Aided Adaptable Interference Cancellation Scheme for Uplink DS-CDMA Mobile radio System" IEEE Globecom 2001, San Antonio, Texas, USA 25-29 Nov. 2001, pp.3163-3167.
4. S.-T. Lin and C.-H. Wei, "Optimal channel Capacity Analysis for DMT VDSL System of Various Symbol Rates" IEEE Globecom 2001, San Antonio, Texas, USA, 25-29 Nov. 2001, pp.389-393.
5. D.-Z. Liu C.-H. Wei and C.-J. Chang, "An Extension of Guard-Interval Based Symbol and Frequency Synchronization Technique for wireless OFDM Transmission" IEEE 54th Vehicular Technology Conference, VTC Fall 2001, 7-11, October 2001, Atlantic City, New Jersey, USA, pp. 2324-2328.
6. S.-T. Lin and C.-H. Wei, "Precursor ISI- Free Frame Synchronization for Dmt VDSL System" The 7th Asia-Pacific Conference on Communication, Sep. 17-20, 2001, Tokyo, Japan, Conference Record pp. 413-416.
7. D.-Z. Liu and C.-H. Wei, "DAPSK-OFDM Transmission for High Data-rate Digital Mobile Radio" 2001 IEEE Int. Symp. On Circuits and Systems, 6-9 May, 2001, Sydney, Australia, Vol.1, pp. II417-II420.
8. T.-C. Chen, C.-H. Wei and S.-W. Wei, "A Two-Stage Reed-Solomon Decoder for Coded 2^m -QAM Systems," 2000 IEEE Asia Pacific Conference on Circuits and Systems, pp. 223-226, Tianjin, China, Dec. 4-6, 2000.
9. D.-Z. Liu and C.-H. Wei, "Asynchronous Symbol Timing Recovery with Adaptive Interpolation Filter for High Data-Rate Digital Mobile Radio", 2000 IEEE Int. Symp. on Circuits and Systems, pp. II85-88, Geneva, Switzerland, May 28-31, 2000.
10. H.-W. Wang and C.-H. Wei, "Pilot-Symbol Assisted Channel Estimation for Coherent DS-CDMA Communications", 2000 IEEE Int. Symp. on Circuits and Systems, pp. III383-386, Geneva, Switzerland, May 28-31, 2000.
11. D.-Z. Liu and C.-H. Wei, "A Nonlinear Timing Error Estimation for High Data-Rate Digital Mobile Radio", ISCOM'99, Kaohsiung, Taiwan, pp.279-283, Nov. 7-10, 1999.
12. H.-C. Hwang and C.-H. Wei, "Blind Interference Suppression Scheme for Non-coherent Demodulation of Direct-Sequence Signals over Multipath Channels", Proc. APCC/OECC'99, pp.689-692, Beijing, China, Oct. 18-22, 1999.
13. H.-C. Hwang and C.-H. Wei, "A Low-Complexity Variable Step-Size Griffith's Algorithm for Blind Demodulation of DS/CDMA Signals", Proceeding of The 10th International Symposium on Personal, Indoor and Mobile Radio Communications, G8-2, Osaka, Japan, Sep. 12-15, 1999.
14. D.-Z. Liu and C.-H. Wei, "Channel Compensation for Preamble-Assisted DAPSK Transmission in Mobile Radio Communication", Proceeding of The 10th International

Symposium on Personal, Indoor and Mobile Radio Communications, B8-4, Osaka, Japan, Sep. 12-15, 1999.

15. H.-C. Hwang and C.-H. Wei, "Adaptive Blind Demodulation of DS/CDMA Signals with Transform Domain Griffiths's Algorithm" 1999 IEEE Int. Symp. on Circuits and Systems, pp. III25-III28, Orlando, Florida, May 30-June 2, 1999.
16. T.-S. Chen, D.-Z. Liu and C.-H. Wei, "Combined Carrier Phase Tracking and Equalization for $\pi/4$ -DQPSK Signals in Mobile Radio" 1999 IEEE Int. Symp. on Circuits and Systems, pp. III-82-III-85, Orlando, Florida, May 30-June 2, 1999.
17. D.-Z. Liu and C.-H. Wei, "Synchronization Scheme in Non-Coherent Demodulation for TDMA Digital Mobile Radio Systems" IEEE Int. Symp. on Circuits and Systems, pp. IV-463-IV-466, Orlando, Florida, May 30-June 2, 1999.
18. J.-M. Chen and C.-H. Wei, "A Novel VLSI Design for Ziv-Lempel Data Compression", 1998 IEEE Asia-Pacific Conference on Circuits and System, Chiangmai, Thailand, pp.739-742, Nov.24-27,1998.
19. H.F. Hsiao, M.-H. Hsieh and C.-H. Wei, "Narrow-Band Interference Rejection in OFDM-CDMA Transmission System" Proc. IEEE ISCAS, pp. IV-437--IV-440, Monterey, CA, May 31-June 3, 1998.
20. D.-Z. Liu and C.-H. Wei, "A Frame Synchronization Scheme for TDMA mobile Radio System" Proc. Int. Symp. on Communications, pp.360-363, Hsinchu, Taiwan, Dec.17-19, 1997.
21. H.-C. Hwang and C.-H. Wei, "Performance Analysis of Spread-Signature CDMA Communications over impulsive Channel" Proc. Int. Symp. on Communications, pp.332-335, Hsinchu, Taiwan, Dec.17-19, 1997.
22. J.-C. Lin and C.-H. Wei, "A Two-Stage SPRT-Based Acquisition Scheme for CDMA Wireless Communication System", Proc. IEEE Int. Symp. on Information Theory, pp.152, Ulm, Germany, Jun 30 - July 4, 1997.
23. C.-H. Wei and C.-P. Tsai, "An Acoustic Canceller Using Lapped Orthogonal Transform" Proc. 1997 IEEE Int. Symp. on Circuits and Systems, pp. 2573-2576, Hong Kong, June 9-12, 1997.
24. C.-H. Chang, S. Siu and C.-H. Wei, "Decision Feedback Equalization Using Complex Backpropagation Algorithm", 1997 IEEE Int. Symp. on Circuits and Systems, pp. 589-592, Hong Kong, June 9-12, 1997.
25. J.-M. Chen and C.-H. Wei, "A High-speed Systolic Array Architecture for Ziv-Lempel Data compression", 1996 HD-Media Technology and Applications Workshop, pp. 863-867, Taipei, Taiwan, Oct. 15-16, 1996.
26. M.-H. Hsieh and C.-H. Wei, "A Frequency Acquisition Scheme for OFDM Systems", IEEE Int. Symp. on Personal, Indoor and Mobile Radio Communications, PIMRC'96, pp. 843-847, Taipei, Taiwan, Oct. 15-18, 1996.
27. H.-C. Hwang and C.-H. Wei, "Performance of Linear Detectors for DS/CDMA in Impulsive Noise Channel", IEEE Int. Symp. on Personal, Indoor and Mobile Radio Communications, PIMRC'96, pp. 560-564, Taipei Taiwan, Oct. 15-18, 1996.
28. D.-Z. Liu and C.-H. Wei, "A Digital Timing Recovery Scheme for TDMA Digital Mobile Radio", IEEE Int. Symp. on Circuits and Systems, Vol. 1, pp.152-154, Atlanta, USA, May 12-15, 1996.
29. Y.-C. Lee and C.-H. Wei, "A Pseudo-2D Adaptive Decision Feedback Equalizer for High Density Magnetic Recording System," Proc. 1995 IEEE Global Telecommunications Conference, Singapore, pp.582-586, Nov. 1995.
30. M.-H. Hsieh and C.-H. Wei, "A Multialphabet Arithmetic Coding with Weighted History Model," Proc. 1995 IEEE Int. Symp. on Information Theory, Whistler, BC. Canada, pp.393, Sep. 1995.

31. J.-Y. Lin and C.-H. Wei, " Baud-Rate Timing Recovery in Class IV Partial Response Magnetic Recording Channels," Proc. 2nd Asia-Pacific Conference on Communications, Osaka, Japan, 3C.2.1-2.4, June 13-16 1995.
32. H.-C. Kuo and C.-H. Wei, " Modified (M,L) Algorithm for Decoding Multilevel Modulation Codes," Proc. 2nd Asia-Pacific Conference on Communications, Osaka, Japan, 4C.2.1-2.5, June 13-16 1995. ~SL1.5 ~P0
33. S. Siu, C.-H. Chang and C.-H. Wei, " Square-Root Recursive Prediction Error Algorithm for Perceptron-Based Adaptive Equalization Over Frequency Selective Fading Channel," Proc. 1995 IEEE Int. Symp. on Circuits and Systems, Seattle, WA. USA, pp.1293-1296, Apr. 30-May 2 1995.
34. C.-H. Chang, S. Siu and C.-H. Wei, " Lp-Norm Error Criterion for Perceptron-Based Adaptive Equalizer," 1994 National Symposium on Telecommunications, pp.269-273, Chia-Yi, Taiwan, ROC, Dec. 20-21, 1994.
35. S.-T. Leu, S.-W. Wei and C.-H. Wei, " A Bit-Loading Algorithm for Discrete Multitone Modulation," 1994 National symposium on Telecommunications, pp.114-119, Chia-Yi, Taiwan, ROC, Dec. 20-21, 1994.
36. J.-Y. Lin and C.-H. Wei, 1994, " Adaptive Volterra-DFE and timing Recovery in Digital Magnetic Recording Systems," IEEE Int. Symp. Circuits and systems, London, Vol.3, pp.41-44.
37. H.-C. Huang and C.-H. Wei, 1994, " A Fast Adaptive RAM-based Decision Feedback Equalizer for Partial-Response Nonlinear Recording Channels " IEEE Int. Symp. Circuits and Systems, London, Vol.3, pp.161-164.
38. H.C. Kuo and C.-H. Wei, 1994, " Reduced Complexity Sequential decoding Scheme for the Multiple Trellis Coded Modulation " IEEE Vehicular Technology Conference, Stockholm, Sweden.
39. H.-C. Hwang and C.-H. Wei, 1993, " Minimax PR-IV Equalizer for Nonlinear Magnetic Recording Channels," Int. Symposium on Communications, Hsin Chu, Taiwan, pp.12.19-12.26.
40. W.-H. Huang and C.-H. Wei, 1993, " A High Speed Pipelined VLSI Implementation of (255, 239) Reed-Solomon Decoder," Int. Symposium on Communications, Hsin Chu, Taiwan, pp.19.1-19.8.
41. T.-J. Liu and C.-H. Wei, 1993, " VLSI Design of Viterbi Decoder for PR-IV Magnetic Recording Channels," Int. Symposium on Communications, Hsinchu, Taiwan, pp.19.17-19.23.
42. C.-H. Chang, S.Su and C.-H. Wei, 1993, " A Decision Feedback Equalizer Utilizing High-Order Correlation " 1993 IEEE Int. Symp. on Circuits and Systems, Chicago, pp.711-714.
43. G.-S. Liu and C.-H. Wei, 1993, " Frequency Response of Adaptive LMS Channel Estimator with Fast Start-Up " IEEE Int. Symp. on Circuit and Systems, Chicago, pp.707-710.
44. C.-H. Wei and W.-J.Chen, 1992, " Application of Digital Tanlock Loop In Digital Cellular Radio with $\pi/4$ -DQPSK Modulation," National Symposium on Telecommunications, Chung-Li, Taiwan, ROC, pp.11-16.
45. C.-H Wei and S -C.Wang, 1992, " A Design of Demultiplexer for MPEG Video Decoder," National Symposium on Telecommunication, Chung-Li, Taiwan, ROC, pp.202-207.
46. C.-H. Chang, S.-Siu and C.-H Wei, 1992, " The Application of High-Order Statistics to Decision Feedback Equalizer," National Symposium on Telecommunications Chung-Li, Taiwan, ROC, pp.370-375.
47. G.-S. Liu and C.-H. Wei, 1992, " Timing Recovery Techniques for Techniques for Digital Cellular Radio with $\pi/4$ -DQPSK Modulation" IEEE Int. Conference on Communication, Chicago, USA., pp.319-323.
48. G.-S. Liu and C.-H. Wei, 1992, " Comparison of Jitter Performances of Timing Recovery Schemes in Digital Cellular Radio Systems " Proc. IEEE Int. Workshop on Intelligent Signal Processing and Communication Systems, Taipei, Taiwan ROC.

49. C.-H. Wei and L.-S Wang, 1991, " A Line-Speed Decoder for Shortened Reed-Solomon Codes," Proc. 1991 Int. Symp. on Communications, pp.40-43, Taiwan. ROC.
50. J.-Y. Lin, C.-H. Wei, 1991, " A New Adaptive Equalizer for Nonlinear Channels," Proc. 1991 IEEE Int. Symp. on Circuits and Systems, pp.2814-2817, Singapore.
51. G.-S. Liu and C.-H. Wei, 1991, " A New Variable Fractional Sample Delay Filter with Nonlinear Interpolation," Proc. 1991 Int. Symp on Circuits and Systems, pp.2451-2454, Singapore.
52. J.-Y. Lin and C.-H. Wei, 1990, " Adaptive Decision Feedback Equalizer for Nonlinear Channels," National Telecommunications Symposium, Hsinchu, Taiwan, pp.508-513.
53. Y.-L. Chen, C.-H. Wei, 1990, Convolutional Coding System with Tone Calibration Technique for Land Mobile Communication," Proc. IEEE TENCON, Hong Kong, pp.672-676.
54. C.-H. Wei, F. Hsiung and S.-Y. Koong, 1990, " Design of Adaptive Equalizer for Digital Subscriber Loop using 2B1Q Code " Pro. 1990 IEEE TENCON, Hong Kong, pp.672-676.
55. J.A. Guu and C.-H. Wei, 1990, " A Maneuvering Target Tracking System with Correlated Measurement Noises," IEEE Int. Radar Conference, Arlington, Virginia, pp.451-455.
56. E.S. Kong and C.-H. Wei, 1989, " Improved Noncoherent Detection for GMSK Signal on Digital Mobile Radio," National Telecommunication Symposium, Taipei, Hsinchu, pp.11-18.
57. C.T. Shih and C.-H. Wei, 1989, " Adaptive Decision Feedback Equalizer for TDMA Mobile Radio Receiver," National Telecommunication Symposium, Taipei, pp.19-26.
58. S.W. Wei, C.-H. Wei, 1989, " High-speed Complete Decoding of Double-Error-Correcting Binary BCH Codes of Primitive Length," Proc. 1989 Int. Symposium on Signals, Systems and Electronics, Erlangen, Rep. of Germany, pp.649-652.
59. C.-H. Wei and S.-W. Wei, 1989, " Lowpass Filter with Signal-Ripple in Both Passband and Stopband," IEEE Int. Symposium on Circuits and Systems, Portland, Oregon, pp.1632-1635.
60. Y.J. Chen and C.-H. Wei, 1988, " TV Ghost Cancelling Using a New Adaptive Transversal Filter," National Telecommunication Symposium, Hsinchu, pp.525-532.
61. J.-S. Wang and C.-H. Wei, 1988, " Tone Calibration Technique for Digital Mobile Communication System with Bandwidth-Efficient Coding," National Telecommunication Symposium, Hsinchu, pp.315-357.
62. L.-M. Chang and C.-H. Wei, 1988, " Computer Simulation of GMSK Digital Mobile Communication Systems with Convolution Coding," National Telecommunication Symposium, Taipei, pp.209-215.
63. C.-H. Wei and N.-C. Chen, 1988, " Sigma-Delta Modulation Adaptive Digital Filter " IEEE Int. Symposium on Circuits and Systems, Espoo, Finland, pp.523-526.
64. C.-H. Wei and C.-C. Wu, 1988, " Signed Binary Delta Modulation Digital Filter " IEEE Int. Conference on Acoustics, Speech, and Signal Processing, New York, pp.1798-1802.
65. S.-W. Wei, F.-M. Kou and C.-H. Wei, 1987, " Design and Realization of Line Equalizer for Digital Subscriber Loops," National Telecommunication Symposium, Taipei, pp.243-250.
66. C.C. Hsu and C.-H. Wei, 1987, " A New Joint Echo Cancellation and Decision Feedback Equalization for Digital Subscriber Loops " IEEE Region 10 Conference (Computers and Communications Technology Toward 2000), Seoul, Korea, pp.1307-1311.
67. C.-H. Wei and N.-A. Kuo, 1987, " Design of Adaptive Electronic Hybrid for Digital Subscriber Loops " IEEE Proc. Int. Symposium on Circuits and Systems, Philadelphia, pp.433-437.
68. N.C. Sze and C.-H. Wei, 1986, " Study of Joint Echo Cancellation and Decision Feedback Equalization in Digital Subscriber Loops," National Telecommunication Symposium, Taipei, pp.383-393.
69. N.A. Kuo and C.-H. Wei, 1986, " Adaptive Electronic hybrid for Digital Subscriber Loops," National Telecommunications Symposium, Taipei, pp.95-105.
70. Y.J. Lin, C.-H. Wei and S. H. Chen, 1986, "On the Comparison of various 1 or 2 bit/sample VQ Coder," National Telecommunication Symposium, Taipei, pp.237-245.

71. C.-H. Wei and W.-K. Jou, 1986, " Switched Capacitor Adaptive Notch Filter" IEEE Int. Symposium on Circuits and Systems, San Jose, pp.607-608.
72. N.C. Sze and C.-H. Wei, 1986, " Study of Joint Echo Cancellation and Decision Feedback Equalization in Digital Subscriber Loops," National Telecommunication Symposium, Taipei, pp.283-393.
73. Y.M. Hsu and C.-H. Wei, 1985, " Modelling and Simulation of Subscriber Loop for Digital Transmission," National Telecommunications Symposium, Taipei, pp.597-605.
74. W.F. Lu, S.H. Chen and C.-H. Wei, 1985, " Mandarin Isolated Word Recognition by Segmentation and Linear Time Warping ", National Telecommunications Symposium, Taipei, pp.331-337.
75. C.-H. Wei and Y. Chien, 1985, " Multiple-Real-Pole and Multiple-Critical-Pole Maximally Flat Active RC Low-pass Filters " IEEE Int. Symp. on Circuits and Systems, Kyoto, pp.313-315.
76. C.-H. Wei and J.J. Lou, 1984, " Microprocessor based Implementation of Digital Adaptive Filter Using Distributed Arithmetic," Proc. of Int. Computer Symposium, Taipei, pp.1114-1121.
77. J. Stepisnik, J.Bjorkstam and C.-H. Wei, 1974, " A New CW NMR Method for Study of Translational Spin Motion," Proc. of 18th Ampere Congress, Nottingham, pp.181-182.

- **Patents :**

1. *High-Speed Decoder for Error-Correcting Cyclic Codes*, Taiwan (ROC) Patent No. 44441.
2. *Real-time Reed-Solomon Decoder*, US Patent No. 5430739.
3. *Real-time Binary BCH Decoder*, US Patent No. 5440570.

- **Honor & Award:**

- Research Fellow, National Science Council, Taiwan, R.O.C., 1996-present.
- Academic Achievement Award, Minister of Education, 2000.
- IEEE Third Millennium Medal, 2000
- IEEE Circuits and Systems Society Golden Jubilee Medal, 2000.
- Engineering Model Award, Chinese Institute of Electrical Engineering, 1997.
- IEEE Fellow, 1996
- Distinguished Engineering Professor Award, 1995.
- Distinguished Research Award, National Science Council, Taiwan, R.O.C., 1991-1996.
- Outstanding Research Award, National Science Council, Taiwan, ROC, 1988-1990.

- **Research Interests :**

Circuits and Systems for

- *Wireless communications*
- *High speed digital subscriber loop*
- *Digital magnetic recording systems*