【Curriculum Vitae】

I had served at Antenna Section of CSIST more than 18 years. In this period of time, I had made his idea come true on the phased array antennas for the phased array radars, reflector antennas for search radars and tracking radars. In years 2000-2007, I lead several hardware design teams at, FOXCONN, and INVENTE, respectively, in charge of research and development of portable handset product design meeting stringent schedule and performance requirement and demonstrating again and again one of great contributors to the rise of Taiwan wireless industry in world market position. In 2007, I has joined at the Department of CE in OIT since 2006. At OIT his research area includes phased array antenna, MIMO antenna, EMC, small antenna, and leaky wave antenna. He also published at least 6 important antenna papers at IEEE Transactions on AP, IET, and more than 50 conference papers. Except for the published antenna papers he also owns 5 antenna patents. Due to his outstanding research for the last 5 years, he receives the Best Research Award at OIT and the promotion to the grade of the IEEE senior member in 2016.

・Name/ Position

Hu, Cheng-Nan/Professor

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・Teaching Courses

1. Electromagnetics
2. Microwave Engineering
3. Advanced Engineering Mathematics
4. Linear Circuit Analysis
5. Introduction to Electromagnetic Compatibility (EMC)
6. Introduction to Microwave System
7. RF Circuits Analysis and Design
8. Introduction to Radio-Frequency Active Circuits

・The Highest Education Degree

Ph.D., National Chiao-Tung Unuversity

・Research Area

1. Phased array antenna,
2. Active MIMO Antenna,
3. EMC,
4. RF test method, and
5. Passive RF circuits design

・Recent Publications

(A) Antenna Array Design/Calibration

[1] D. –C. Chang, Cheng-Nan Hu, C. –I. Hung, and K. –T. Ho, " Pattern synthesis of the offset reflector antenna system with less complicated phased array feed," IEEE Transactions on antenna and propagation, vol. 42, no. 2, Feb. 1994.

[2] Cheng-Nan Hu and Ching-Kuang C. Tzuang, "Microstrip leaky-mode antenna array," *IEEE Trans. on Antennas and Propagation*, vol. 45, no. 11, pp. 1698~1699. Nov. 1997.

[3] Cheng-Nan Hu and C.-K. C. Tzuang, "Injection-locked coupled microstrip leaky-mode array," *IEE Proceedings, Microwaves, Antennas and Propagation*, vol. 147, no. 5, pp. 364-368, Oct. 2000

[4] Cheng-Nan Hu and C.-K. C. Tzuang, "Analysis and design of large leaky-mode array employing the

coupled-mode approach," *IEEE Trans. on Microwaves Theory and Techniques*, vol. 49, no. 4, pp. 629-636, April 2001

[5] Cheng-Nan Hu, Book Tai and Allen Yang, "Meander-Line Folded Monopole Design for UMTS-HSDPA-Based Data-Card Applications," *IEEE Antennas and Wireless Propagation Letters, Vol. 7, 2008, pp.279-282*

[6] Cheng-Nan Hu, "Diversity Antenna Design for use at UMTS/HSPA-Based Data-Cards," IET Microwaves, Antennas& Propagation, 2010, Vol. 4, Iss. 9, 1191-1198.

[7] Dau-Chyrh Chang, Cheng-Nan Hu: "Smart Antennas for Advanced Communication Systems". *Proceeding IEEE*, Volume 100, Number 7, July 2012 2233-2249

[8] Cheng-Nan Hu, "A Novel Method for Calibrating Deployed Active Antenna Arrays," *IEEE Trans. on Antennas and propagation*, *Vol. 63, No. 04*, April 2015, pp. 1650-1657.

[9] Cheng-Nan Hu, and Dau-Chyrh Chang," Nonlinear Effects of Power Amplifiers on Adaptive Antenna Systems," *IEEE Trans. on Antennas and Propagation, Vol. 64, No. 04*, April 2016, pp. 1444-1453

[10] Cheng-Nan Hu, and Dau-Chyrh Chang, C.-H. Yu, T.-W. Hsaio, and D.-P Lin, " Millimeter-Wave Microstrip Antenna Array Design and an Adaptive Algorithm for Future 5G Wireless Communication Systems ," International Journal of Antennas and Propagation (IJAP); Volume 2016, pp. 1-10; Article ID 7202143, http://dx.doi.org/10.1155/2016/7202143.

(B) EMC Analysis/Measurement

[11] Cheng-Nan Hu, and Husan-Chung Ko, "Improved IC production yield by taking into account the electromagnetic interference level during testing," *IEEE Trans. On EMC* Vol. 53, No. 2, May 2011, pp. 266-273.

[12] Cheng-Nan Hu, Wen-Ju Chen, and Husan-Chung Ko, "Enhancement of RF device's contact test using a novel method, " *IET Since, Measurement & Technology*, 2014, Vol.8, Issue, 4, pp.236-243.

(C) Patents in recent 5 years

[1] Cheng-Nan Hu," METHOD AND SYSTEM FOR AUTOMATICALLY TESTING THE WIRELESS CHIP" Taiwan, Patent No: I 435551 (2014/4/21-2031/2/24)

[2] Cheng-Nan Hu," METHOD AND APPARATUS FOR CALCULATING SMART ANTENNA WEIGHT OF SPATIAL DIVISION MULTIPLE ACCESS SYSTEM" Taiwan, Patent No: I 434533 (2014/4/11-2031/4/7)

[3] Cheng-Nan Hu、J.-W. Huang，"DIVERSITY ANTENNA"，Taiwan, Patent No: I 513109 (2015/12/11-2033/7/18)

[4] Cheng-Nan Hu" A FAR-FIELD CALIBRATION SYSTEM OF AN ANTENNA ARRARY SYSTEM" Taiwan, Patent No: I 518994 (2016/1/21-2033/3/12;)

[5] Cheng-Nan Hu" A NOVEL FAR-FIELD CALIBRATION SYSTEM OF AN ANTENNA ARRARY SYSTEM" Taiwan, Patent No: I 540792 (2016/7/1-2034/11/13)