

Donald Y.C. Lie (S'86–M'87–SM'00) received his B.S.E.E. degree from the National Taiwan University in 1987, and the M.S. and Ph.D. degrees in electrical engineering (minor in applied physics) from the California Institute of Technology (Caltech), Pasadena, in 1990 and 1995, respectively. He has held technical and managerial positions at companies such as Rockwell International, Silicon-Wave (now Qualcomm), IBM, Microtune Inc., SYS Technologies, and Dynamic Research Corporation (DRC). He is currently the Keh-Shew Lu Regents Chair Professor in the Department of Electrical and Computer Engineering, Texas Tech University, Lubbock, Texas, and also an Adjunct Professor in the Department of Surgery, Texas Tech University Health Sciences Center (TTUHSC). He is instrumental in bringing in multi-million dollars research funding and also designed real-world commercial communication products sold internationally. He has been a Visiting Lecturer to the ECE Department, University of California, San Diego (UCSD) since 2002 where he taught upper-division and graduate-level classes and affiliated with UCSD's Center of Wireless Communications (CWC) and co-supervised Ph.D. students. Dr. Lie has been serving on the Executive Committee of the IEEE Bipolar/BiCMOS Circuits and Technology Meeting (BCTM), IEEE SiRF, IEEE MWSCAS, IEEE TSWMCS, and also serving on various Technical Program Committees (TPCs) for IEEE RFIC Symp., IEEE VLSI-DAT, IEEE ISCAS, IEEE PAWR, IEEE LiSSA, IEEE BIOCAS, etc. Dr. Lie has been awarded with the US NAVY SPAWAR SSC San Diego "Center Team Achievement Award", Spring 2007; won 3 DRC Silver Awards of Excellence, 2005-2007; received IBM "FIRST" chairman patent award, 2001-2002 and Rockwell International's "FIRST" engineering awards, 1996-1998. He has delivered plenary talks, short courses, invited talks, workshops at various conferences, universities and companies. He and his students have won several Best Graduate Student Paper Awards and Best Paper Awards in international conferences in 1994, 1995, 2006, 2008 (twice), 2010 (twice), 2011, and 2012. Dr. Lie is serving as an Associate Editor of *IEEE Microwave and Wireless Components Letters (MWCL)*, the Area Editor-in-Chief for the *International Journal on Wireless and Optical Communications*, and also on the Editorial Board for the *i-manager's Journal on Electrical Engineering*. He was a Guest Editor of *IEEE Journal of Solid-State Circuits (JSSC)* in 2009, the Special Topic Editor for *IEEE MWCL* in 2012, and also has served as a reviewer for many journals and funding agencies. He has consulted for several IC design companies, a business trial law firm, and a research institute. He has authored/coauthored over 140 peer-reviewed technical papers and book chapters and holds five U.S. patents. Dr. Lie's group has published three *most downloaded TOP 100 papers* on the IEEE *Xplore*TM among millions of publications in Sept, 2012, June 2012, and Sept. 2009 (ranked #80, #88, and #21, respectively). His research interests are: (1) low-power RF/Analog IC and System-on-a-Chip (SoC) design and test; and (2) interdisciplinary research on medical electronics, biosensors, and biosignal processing.

LIST OF PUBLICATIONS

(I) Book and Book Chapters (highlighted work: "*in preparation and to be submitted*")

1. **Book Contract Awarded:** "High-Efficiency SiGe BiCMOS RF Power Amplifier Design", **D.Y.C. Lie**, contract awarded. Scheduled to be published by Cambridge University Press, (*in preparation and to be submitted*)
2. **Invited book chapter:** "Design of Portable High-Efficiency Polar Transmitters for Broadband Wireless Applications Using the Envelope-Tracking Technique" in *CMOS Nanoelectronics: Analog and RF VLSI*

Circuits, D.Y.C. Lie, Y. Li and J. Lopez, ed. kris iniewski, McGraw Hill Professional, Ch. 3, pp. 91-133, July 19 (2011), ISBN 978-0-07-175565-8

3. **Invited book chapter:** "A 2.4GHz Non-Contact Biosensor System for Continuous Monitoring of Vital-Signs", Donald Y.C. Lie, Ravi Ichapurapu, Suyash Jain, Jerry Lopez, Ronald E. Banister, Tam Nguyen, and John Griswold, in *Telemedicine Techniques and Applications*, ISBN 978-953-307-354-5, edited by: Georgi Graschew and Stefan Rakowsky, Publisher: InTech, June 2011 <http://www.intechopen.com/articles/show/title/a-2-4ghz-non-contact-biosensor-system-for-continuous-monitoring-of-vital-signs>
4. **Invited book chapter:** chapter 9.2 in *Silicon Heterostructure Handbook: Materials, Fabrication, Devices, Circuits and Applications of SiGe and Si Strained-Layer Epitaxy*, "SiGe as an Enabler for Wireless Communications Systems", L.E. Larson and D.Y.C. Lie, ed. John Cressler, CRC Press, Boca Raton, FL, pp. 897-917 (2005) ISBN: 0849335590
5. **Invited review book chapter** on the prestigious "*Semiconductors and Semimetals*" series, Vol. 73 "Processing and Properties of Compound Semiconductors", edited by R. Willardson and E. Weber, Chap. 4 "Si/SiGe Processing", D.Y.C. Lie and K.L. Wang, pp.151-197, Academic Press, San Diego, (2001)
6. **Invited review book chapter** on: "Si/SiGe Heterostructures for Si-Based Nanoelectronics", D.Y.C. Lie and K.L. Wang, *Handbook of Advanced Electronic and Photonic Devices and Materials*, edited by H.S. Nalwa, Chap. 1, pp. 1-69, Academic Press, San Diego, (2000)

(II) Archived Journal Articles (highlighted work: "in preparation and to be submitted")

1. "A Highly Efficient Watt-level SiGe BiCMOS Power Amplifier with Envelope Tracking for LTE Applications", R. Wu, Y. Li, J. Lopez and D.Y.C. Lie, IEEE J. Solid-State Circuits Sept. (2013); **invited (in preparation and to be submitted)**
2. "An 8-bit Single-Ended Ultra-Low-Power SAR ADC with Novel DAC Switching and Digital Control Circuits for Bio-Medical Applications", W. Hu, Y.-T. Liu, D.Y.C. Lie and B.P. Ginsburg, accepted to appear in the IEEE Trans. Circuits and Systems – I (TCAS-I), (2012), *in press*
3. **Invited paper:** "Challenges of Cochlear Implants", T. Nguyen, S. Zupancic, and D.Y.C. Lie, *accepted* to appear in the IEEE CAS (Circuits and System) Mag., 4Q, 2012; *in press*
4. "Maximizing Parallel Testing in an FM Receiver", M Naing, D. Webster, N. Blue, R. Hudgens, Z. Parkar, S. Bhatara, P. Gupta, and D.Y.C. Lie, accepted by *Journal of Electronic Testing: Theory and Applications (JETTA), Special Issue on Analog, Mixed-Signal, RF, & MEMS Testing*, Springer, (2012); *in press*
5. **Ranked #80 among the most downloaded TOP 100 papers on all IEEE Xplore over 3+ million publications in Sept., 2012:** "A Fully-Monolithic High-Efficiency SiGe BiCMOS Power Amplifier System Using Envelope Tracking with an On-Chip Transformer and a CMOS Envelope Modulator", Y. Li, J. Lopez, C. Schecht, R. Wu and D.Y.C. Lie, pp. 2007-2018, IEEE J. Solid-State Circuits Sept. (2012)
6. **Ranked #88 as the most downloaded paper among all IEEE Xplore over 3+ million publications in June, 2012:** "A Fully Monolithic BiCMOS Envelope-Tracking Power Amplifier with On-Chip Transformer for Broadband Wireless Applications", Y. Li, J. Lopez, R. Wu and D.Y.C. Lie, *IEEE Microwave and Wireless Components Letters (MWCL)*, pp. 288-290, June (2012)
7. "Editorial for Special Topic on Supply-Modulated Power Amplifiers" D.Y.C. Lie and C.-K. C. Tzuang, IEEE Microwave and Wireless Components Letters (MWCL), pp. 277-278, June (2012)
8. "A Brief Survey of Several High Efficiency Silicon-Based RF Power Amplifier Design Techniques for Mobile Broadband Wireless Communications", R. Li, Y. Li, J. Lopez and D.Y.C. Lie, *Special issue on digital front-end and RF processing for ZTE Communications: An International Journal* vol. 9, No. 3, issue 31, pp. 28-35, Sept. (2011)
9. "Replacing Error Vector Magnitude (EVM) Tests with RF and Analog BiSTs", D.L. Webster, H. P. Largey, and D.Y.C. Lie, IEEE Design & Tests of Computers, issue 99, Jan. 10 (2011); <http://www.computer.org/portal/web/csdl/doi/10.1109/MDT.2011.1> ; pp. 2-11, Nov./Dec. (2011)
10. "A Highly Efficient SiGe Envelope-Tracking Power Amplifier with an Integrated CMOS Envelope Modulator for Mobile WiMAX/3GPP LTE Transmitters", Y. Li, J. Lopez, P.H. Wu, W. Wu, R. Wu and D.Y.C. Lie, IEEE Trans. Microw. Theory Tech., vol. 59, no. 10, pp. 2525-2536, Oct. (2011)
11. **Invited Book Review:** "Multi-Mode/Multi-Band RF Transceivers for Wireless Communications: Advanced Techniques, Architectures, and Trends", edited G. Hueber and R. Staszewski, Wiley-IEEE Press, 2011, New Jersey, ISBN: 9780470634455; by D.Y.C. Lie, *IEEE Circuits and Systems Society Magazine Newsletter*, Vol. 5, Issue 4, Aug. 2011

12. "III-nitride full-scale high-resolution microdisplays", J. Day, J. Li, D.Y.C. Lie, J.-Y. Lin, and H.-X. Jiang, *Applied Physics Letters*, Appl. Phys. Lett. 99, 031116 (2011)
13. "A 10-bit Ultra-Low-Power SAR ADC with a Novel DAC Switching Method", W. Hu and D.Y.C. Lie, *i-manager's Journal on Electrical Engineering*, special issue on "VLSI Design Methodologies/Embedded Systems", Vol. 4, NO. 3, pp. 17-22, Jan.-March issue (2011)
14. "Circuits and System Design of RF Polar Transmitters Using Envelope-Tracking and SiGe Power Amplifier For Mobile WiMAX/WiBro", Y. Li, J. Lopez, D.Y.C. Lie, K. Chen, S. Wu, T.Y. Yang and J-K. Ma, *IEEE Trans. Circuits and Systems – I (TCAS-I)*, 58,5, pp. 893 - 901 (2011)
15. "'RF-SoC': Integration Trends of On-Chip CMOS Power Amplifier (PA): Benefits of External PA vs. Integrated PA for Portable Wireless Communications", **D.Y.C. Lie**, *International Journal of Microwave Science and Technology*, vol. 2010, Article ID 380108, pp. 1-7, doi:10.1155/2010/380108 (2010) <http://www.hindawi.com/journals/ijmst/2010/380108.html>
16. "Introduction to the Special Section on the 2008 Bipolar/BiCMOS Circuits and Technology Meeting", **D.Y.C. Lie**, *IEEE J. Solid-State Circuits*, 44, 9, pp. 2265-2266, Sept. (2009)
17. **Ranked #21 as the most downloaded paper among all IEEE Xplore over 2+ million publications in Sept., 2009:** "Design of Highly-Efficient Wideband RF Polar Transmitters Using the Envelope-Tracking Technique", J. Lopez, Y. Li, **D.Y.C. Lie**, J.D. Popp, K. Chen, S. Wu, T. Yang and J-K. Ma, *IEEE J. Solid-State Circuits*, 44, 9, pp. 2276-2294, Sept. (2009)
18. "Highly-Efficient Monolithic Class E SiGe Power Amplifier Design at 900 and 2400MHz", **D.Y.C. Lie**, J. Lopez, J.D. Popp, J.F. Rowland, G. Wang, G. Qin, and Z. Ma, *IEEE Trans. Circuits and Systems – I (TCAS-I)*, 56, 7, pp. 1455-1466, July (2009)
19. "The Design and Analysis of Fully-Monolithic RF Coupled-Voltage-Controlled-Oscillator 1-Dimensional Arrays in 0.18 μ m SiGe BiCMOS", J. Lopez, D.Y.C. Lie, J. Cothorn, J. Neff and B.K. Meadow, *i-manager's Journal on Electrical Engineering*, special issue on "Current Research in Analog Circuits and Signal Processing", Vol. 2, Issue 1, pp. 6-13, July-Sept. (2008)
20. "RF Phase Error Built-in-Self-Test for GSM/EDGE", D. Webster, L. Phan, O. Eliezer, R. Hudgens and **D.Y.C. Lie**, *i-manager's Journal on Electrical Engineering*, special issue on "VLSI systems and Applications", Vol. 1, Issue 4, pp. 39-44, June (2008)
21. "A 65 μ A 8MHz Integrated Oscillator with LDO Regulator Supply for Low-Power Handheld SoC Applications", J. Day, P. Vulpoiou, J. Julich, and **D.Y.C. Lie**, *i-manager's Journal on Electrical Engineering*, special issue on "VLSI systems and Applications", Vol. 1, Issue 4, pp. 9-14 (2008)
22. "Behavior Modeling and Comparison of Envelope Tracking vs. Envelope-Elimination-and-Restoration for Class E SiGe PA Linearization", Y. Li, J. Lopez and **D.Y.C. Lie**, *i-manager's Journal on Electrical Engineering*, special issue on "VLSI systems and Applications", Vol. 1, Issue 4, pp. 15-21 (2008)
23. "A Monolithic High-Efficiency 2.4 GHz 20 dBm SiGe BiCMOS Envelope Tracking OFDM Power Amplifier", F. Wang, D. Kimball, **D.Y.C. Lie**, P. Asbeck and L.E. Larson, *IEEE J. Solid-State Circuits*, 42, 6, pp. 1271-1281 (2007)
24. "Design of Wide Bandwidth Hybrid Envelope Elimination and Restoration Power Amplifiers for Wideband OFDM Applications", F. Wang, D. Kimball, J. Popp, A. Yang, **D.Y.C. Lie**, P. Asbeck and L.E. Larson, *IEEE Trans. Microwave Theory and Techniques*, Vol. 54, 12, pp. 4086-4099, Dec. (2006)
25. **Invited paper in the inaugural issue:** "RF-SoC: Technology Enablers and Road Blocks for Single-Chip Wireless RF IC Design", **D.Y.C. Lie** and L.E. Larson, *International Journal on Wireless and Optical Communications*, Vol. 1, No. 1, pp. 1-23 (2003)
26. **IEEE journal front-cover special review article:** "Doping and processing epitaxial Ge_xSi_{1-x} films on Si(100) by ion implantation for Si-based heterojunction devices applications," **D.Y.C. Lie**, *IEEE J. Electron. Mater.*, 27, pp. 377-413 (1998)
27. "SiGeC alloy layer formation by high-dose C⁺-implantation into pseudomorphic metastable Ge_{0.08}Si_{0.92} on Si(100)" S. Im, J.H. Song, **D.Y.C. Lie**, F. Eisen, H. Atwater and M-A. Nicolet, *J. Appl. Phys.*, 81, 1700 (1997)
28. "Short and long annealing of high-dose arsenic-implanted metastable pseudomorphic Si(100)/Ge_xSi_{1-x}," **D.Y.C. Lie**, S. Im, M-A. Nicolet, and N.D. Theodore, *J. Appl. Phys.* 79, 8341 (1996)
29. "Advantage of short over long annealing to activate As of low-dose implanted in metastable pseudomorphic Ge_{0.08}Si_{0.92} layers on Si(100)" S. Im, **D.Y.C. Lie**, M-A. Nicolet, and N.D. Theodore, *J. Appl. Phys.* 79, 7389 (1996)

30. "Dopant activation and strain relaxation in metastable pseudomorphic Si(100)/Ge_{0.12}Si_{0.88} implanted with P ions," **D.Y.C. Lie**, J.H. Song, and N.D. Theodore, *Appl. Surf. Sci.* 92, 557 (1996)
31. "Strain evolution and dopant activation in P-implanted metastable pseudomorphic Si(100)/Ge_{0.12}Si_{0.88}," **D.Y.C. Lie**, J.H. Song, M-A. Nicolet, and N.D. Theodore, *IEEE J. Electron. Mater.* 25, 87 (1996)
32. "Advantage of rapid thermal annealing over furnace annealing for P-implanted metastable Si(100)/Ge_{0.12}Si_{0.88}," **D.Y.C. Lie**, J.H. Song, M-A. Nicolet, and N.D. Theodore, *Appl. Phys. Lett.* 66, 592 (1995)
33. "Dependence of damage and strain on the temperature of Si irradiation in epitaxial Ge_{0.10}Si_{0.90} films on Si(100)," **D.Y.C. Lie**, J.H. Song, N.D. Theodore, A. Vantomme, M-A. Nicolet, T.K. Carns, and K.L. Wang, *J. Appl. Phys.*, 77, 2329 (1995)
34. "Solid phase epitaxial regrowth and dopant activation of P-implanted metastable pseudomorphic Ge_{0.12}Si_{0.88} on Si(100)," **D.Y.C. Lie**, N.D. Theodore, J.H. Song, and M-A. Nicolet, *J. Appl. Phys.* 77, 5160 (1995)
35. "Damage and strain in pseudomorphic versus relaxed Ge_xSi_{1-x} layers on Si," **D.Y.C. Lie**, A. Vantomme, F. Eisen, M-A. Nicolet, T. Vreeland, Jr., T.K. Carns, V. Arbet-Engels, and K.L. Wang, *IEEE J. Electron. Mater.*, 23, 369 (1994)
36. "Hole mobility measurements in heavily boron doped Ge_xSi_{1-x} strained layers," T.K. Carns, S.K. Chun, M.O. Tanner, K.L. Wang, T.I. Kamins, J.E. Turner, **D.Y.C. Lie**, M-A. Nicolet, and R.G. Wilson, *Trans. IEEE Electron Devices*, 41, 1273 (1994)
37. "Damage and strain in epitaxial Ge_xSi_{1-x} films irradiated with Si," **D.Y.C. Lie**, A. Vantomme, F. Eisen, T. Vreeland, Jr., M-A. Nicolet, T.K. Carns, V. Arbet-Engels, and K.L. Wang, *J. Appl. Phys.* 74, 6039 (1993)
38. "Ge epilayer of high quality on a Si substrate by solid-phase epitaxy," W.S. Liu, J.S. Chen, **D.Y.C. Lie**, and M-A. Nicolet, *Appl. Phys. Lett.* 63, 1405 (1993)
39. "Inntersubband transitions in pseudomorphic InGaAs/GaAs/AlGaAs multiple step quantum wells," H.S. Li, Y.W. Chen, K.L. Wang, and **D.Y.C. Lie**, *J. Vac. Sci. Tech. (B)*, 11, 1840 (1993)

(III) Peer-Reviewed Refereed Conference Proceedings

1. "Wideband Class J High Efficiency Envelope Tracked Power Amplifiers", W. Choi, D.Y.C. Lie, J. Lopez, B. Ma, R. Mongia, S. Nelson, K.O. S. Shichijo and M. Walker, submitted to IEEE GOMAC, Las Vegas, 2013
2. "A SiGe Bipolar-MOSFET Cascode Power Amplifier with Improved Linearity for LTE Applications", accepted and to be presented at IEEE PAWR, Austin, TX, Jan. 23-25, (2013)
3. **Invited Paper:** "Design of Monolithic Silicon-Based Envelope-Tracking Power Amplifiers for Broadband Wireless Applications", D.Y.C. Lie, Y. Li, R. Wu, W. Hu, J. Lopez, and C. Schecht, Proc. IEEE Asia Pacific Conference on Circuits and Systems (APCCAS'12), Kaohsiung, Taiwan, Dec. 2-5 (2012)
4. "A Real-Time Wireless Fall Detection Sensor System Using Accelerometer and Gyroscopes", D. Vignes, J. Jacob, W. Hu, V. Das, T. Nguyen, J. Lopez, S. Zupancic, and **D.Y.C. Lie**, Abstract Book, IEEE EMBC12, p. 701, San Diego, CA, Aug. 28-Sept. 2, 2012
5. "A Highly Efficient Watt-level SiGe BiCMOS Power Amplifier with Envelope Tracking for LTE Applications", R. Wu, Y. Li, J. Lopez and **D.Y.C. Lie**, Proc. IEEE BCTM, pp. 45-48, Sept. 30-Oct.3, Portland OR, USA (2012)
6. "A SiGe BiCMOS Cascode Power Amplifier with Monolithic SOI Envelope Modulators for High-Efficiency Envelope Tracking", R. Wu, Y. Li, W. Hu, J. Lopez and **D.Y.C. Lie**, Proc. IEEE BCTM, pp. 33-36, Sept. 30-Oct.3, Portland OR, USA (2012)
7. **Invited paper:** "An Ultra-Low Power Interface CMOS IC Design for Biosensors Applications", W. Hu, Y.-T. Liu, V. Das, C. C. Schecht, T. Nguyen, **D.Y.C. Lie**, S. Wu, Y. H. Chu and T.Y. Yang, Proc. IEEE MWSCAS, pp. 1196-1199, Aug.. 4-5, Boise Idaho (2012)
8. "An 8-bit Single-Ended Ultra-Low-Power SAR ADC with a Novel DAC Switching Method", W. Hu, **D.Y.C. Lie**, and Y.-T. Liu, Proc. IEEE ISCAS'12, pp. 2349-2352, May 20-23, Seoul, Korea (2012)
9. "An Ultralow-Power CMOS Transconductor Design with Wide Input Linear Range for Biomedical Applications", Y.-T. Liu, **D.Y.C. Lie**, W. Hu and T. Nguyen, Proc. IEEE ISCAS'12, pp. 2211-2214, May 20-23, Seoul, Korea (2012)
10. **Best Paper Award Winner:** "A Monolithic 1.85GHz 2-stage SiGe Power Amplifier with Envelope Tracking for Improved Linear Power and Efficiency", R. Wu, Y. Li, J. Lopez, and D.Y.C. Lie, Proc. Tech. Dig. IEEE VLSI-DAT Conference, Hsin-Chu, Taiwan, April 25-27 (2012)

11. "A Fully Monolithic 1-D Coupled-Oscillator Array IC Realizing Electronic Beam-Steering for L-Band Phased-Array Antennas", J. Lopez and **D.Y.C. Lie**, Proc. IEEE Government Microcircuit Applications and Critical Technology Conference (GOMAC), March 19-22, Las Vegas, NV (2012)
12. "Full-Scale Self-Emissive Blue and Green Microdisplays Based on GaN Micro-LED Arrays", J. Day, J. Li, **D.Y.C. Lie**, C. Bradford, J.Y. Lin, and H.X. Jiang, SPIE Photonics West, Jan. 21-26, San Francisco, CA, USA (2012)
13. "III-nitride blue/green full scale high-resolution microdisplays realized", J. Day, J. Li, D.Y.C. Lie, C. Bradford, J. Y. Lin, and H. X. Jiang, SPIE Photonics West, Jan. 21-26, San Francisco, CA, USA (2012)
14. "Design of Axial-mode Helical Antennas for Doppler-based Continuous Non-contact Vital Signs Monitoring Sensors", A. Boothby, R. Hwang, V. Das, J. Lopez, and **D.Y.C. Lie**, Proc. IEEE RAWCON, pp. 87-90, Santa Clara, CA, Jan. 15-19 (2012)
15. "Antenna Evaluation of a Non-Contact Vital Signs Sensor for Continuous Heart Rates Monitoring", V. Das, A. Boothby, J. Lopez, R. Hwang, T. Nguyen and **D.Y.C. Lie**, Proc. 2nd IEEE Topical Conf. on Biomedical Wireless Technologies, Networks, and Sensing Systems (BioWireless), pp. 13-16, Santa Clara, CA, Jan. 15-19 (2012)
16. "A Watt Level Highly Efficient 1-Watt Broadband BiCMOS Class-J SiGe Power Amplifier at 700MHz", R. Wu, J. Lopez, Y. Li, and **D.Y.C. Lie**, Proc. 12th Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (SiRF'12), Santa Clara, CA, pp. 69-72, Jan. 15-19 (2012)
17. **Invited Feature Article**: "High-resolution group III nitride microdisplays", Jingyu Lin, Jacob Day, Jing Li, Donald Lie, Charles Bradford, and Hongxing Jiang, SPIE Newsroom, *Optoelectronics & Communications*, DOI: 10.1117/2.1201112.004001, Dec. 14 (2011) <http://spie.org/x84505.xml?ArticleID=x84505>
18. **Invited paper**: "Ultralow-power Analog Front-End IC Design for an Implantable Cardioverter Defibrillator (ICD)", **D.Y.C. Lie**, Tam Nguyen, W. Hu, Y.T. Liu, and B. Dsouza, Proc. IEEE 9th International Conference on ASIC (ASICON), pp. 1018-1021, Xiamen, China, Oct. 25-28 (2011)
19. "A highly-efficient BiCMOS cascode Class-E power amplifier using both envelope-tracking and transistor resizing for LTE-like applications", Y. Li, R. Wu, J. Lopez and **D.Y.C. Lie**, Proc. IEEE BCTM, pp.142-145, Oct. 9-11, Atlanta, GA (2011)
20. **Invited paper**: "Injection-Locked Fully-Monolithic Bilaterally-Coupled RF 1-Dimensional Voltage-Controlled-Oscillators Arrays in 0.18 μ m SiGe BiCMOS", **D.Y.C. Lie**, J. Lopez, C. Leavitt, B.K. Meadow, J. Neff and J. Cothorn, Proc. IEEE Int'l Symp. on Nonlinear Theory and its Applications (NOLTA), pp. 386-389, Kobe, Japan Aug. (2011)
21. **Invited paper**: "Transient Current Regulation Using a Single DC-DC Converter for High-Efficiency RGB LED Driver"; J.W Day, J.V. Santos, and D.Y.C. Lie, Proc. 54th IEEE Int'l Midwest Symposium on Circuits and Systems (MWSCAS), Seoul, Korea, August 7-10 (2011)
22. **Invited paper**: "An output-capacitorless linear regulator for use in integrated portable power solutions", J. Day and D.Y.C. Lie, Proc. 54th IEEE Int'l Midwest Symposium on Circuits and Systems (MWSCAS), Seoul, Korea, August 7-10 (2011)
23. **Invited paper**: "A 1 Watt High-Efficiency Class-E SiGe Bipolar Power Amplifier with Through-Wafer-Vias at 2.4GHz", Proc. 54th IEEE International Midwest Symposium on Circuits and Systems (MWSCAS 2011), Seoul, Korea, August 7-10 (2011)
24. "A Fall Detection Study on the Sensor Placement Locations and the Development of a Threshold-Based Algorithm Using Both Accelerometer and Gyroscope", J. Jacob, T. Nguyen, S. Zupancic and D.Y.C. Lie, Proc. IEEE Int'l Conf. on Fuzzy Logics (Fuzz'11), pp. 666-671, Taipei, Taiwan, June 27-30 (2011)
25. "CMOS Envelope Tracking Amplifier IC Design for High-Efficiency RF Polar Transmitters", P-H. Wu, Y. Li, W. Hu, J. Lopez, D.Y.C. Lie and T.J. Liang, Proc. IEEE International Symposium on Circuits and Systems (ISCAS) 2011, Rio de Janeiro, Brazil, May 15-18, (2011)
26. "Relationship Between Cerebral Perfusion And EEG In The Rat Brain", K. J. Oommen, J. Oommen, D.Y.C. Lie, Imam. S, M. Chyu and Y. Zhang, Proc. 5th Int'l IEEE EMBS Conf. on Neural Engineering, Cancun, Mexico, April 27 - May 1 (2011)
27. "A Broadband Polar Transmitter Using a SiGe Power Amplifier with a CMOS Envelope Tracking Amplifier for Mobile WiMAX", Y. Li, P. Wu, J. Lopez, R. Wu, D.Y.C. Lie, K.C.J. Chen, S. Wu and T.Y. Yang, Proc. IEEE VLSI-DAT Conference, Hsin-Chu, Taiwan, April 25-27 (2011)
28. "Ultralowpower Analog Front-End Circuits and System Design for an Implantable Cardioverter Defibrillator (ICD)", W. Hu, T. Nguyen, Y.-T. Liu and D.Y.C. Lie, Proc. the fifth annual IEEE-NIH Life Science Systems and Application Workshop (LiSSA'11), pp.34-37, NIH Campus, Bethesda, Maryland, USA, April 7-8 (2011)

29. "Low Power RF Wireless Sensor Design With Highly Efficient SiGe Power Amplifier and Ultralowpower ADC", D.Y.C. Lie, W. Hu and J. Lopez, Proc. Government Microcircuit Applications and Critical Technology Conference (GOMAC), pp. 137-140, March 21-24, Orlando, FL (2011)
30. "Experimental Demonstration of Noncontact Pulse Wave Velocity Monitoring Using Multiple Doppler Radar Sensors", L. Li, C. Li and D.Y.C. Lie, Proc. IEEE 32nd Annual Int'l Conf. IEEE Engineering in Medicine and Biology Society (EMBC'10), Buenos Aires, Argentina, Aug. 30-Sept. 3 (2010)
31. **Winner of the 2nd Place Best Student Paper Award:** "A Broadband SiGe Power Amplifier in an Efficient Polar Transmitter Using Envelope-Tracking for Mobile WiMAX", Y. Li, J. Lopez, D.Y.C. Lie, K. Chen, S. Wu, and T.Y. Yang, Proc. 11th IEEE Topical Conference on Silicon Monolithic Integrated Circuits in RF Systems, pp.137-140, Phoenix, AZ, Jan. 17-20 (2011)
32. **Invited paper:** "RF IC Design of Highly-Efficient Broadband Polar Transmitters for WiMAX and 3GPP LTE Applications", **D.Y.C. Lie**, Y. Li and J. Lopez, Proc. IEEE International Conference on Solid-State and Integrated-Circuit Technology (ICSICT), pp.150-153, Nov. 1-4, Shanghai, China (2010)
33. "A Novel Phase-Shifterless Beam Steering Method for RF Phased Arrays Using Monolithic 1-D Coupled-VCOs with Integrated MOSFET Switches", J. Lopez, **D.Y.C. Lie**, B.K. Meadow, J. Neff and J. Cothorn, Proc. IEEE Int'l Symp. on Phased Array Systems and Technology, Oct. 12-15, pp. 660-664, Boston, MA, USA (2010)
34. **Best Paper Award Winner:** "Structural Verification of WLAN System using Simple BiSTs", D. Webster, J. Cavazos, D. Guy, P. Patchen, and D.Y.C. Lie, Proc. IEEE Sixth Dallas Circuits and Systems Workshop (DCAS), Oct. 17-18, Dallas (2010)
35. "Fully-Integrated 1-Dimensional RF Coupled-Oscillator Network for Phase-Shifterless Phased-Array Systems", J. Lopez, **D.Y.C. Lie**, B.K. Meadow, J. Neff and J. Cothorn, Proc. IEEE BCTM, pp. 17-20, Austin, TX, Oct. 4-6 (2010)
36. "A Highly Efficient SiGe Differential Power Amplifier Using An Envelope-Tracking Technique for 3GPP LTE Applications", Y. Li, J. Lopez, D.Y.C. Lie, K. Chen, S. Wu, and T.Y. Yang, pp. 121-124, Proc. IEEE BCTM, Austin, TX, Oct. 4-6 (2010)
37. **Invited paper:** "The Experimental Findings of Monolithic 1-Dimensional Nonlinearly Coupled-VCO Array", D.Y.C. Lie, J. Lopez, J. Cothorn, J. Neff, and B.E. Meadows, Proc. International Conference on Applications in Nonlinear Dynamics (ICAND 2010), Lake Louise, Alberta, Canada, September, 21-25 (2010)
38. **Invited paper:** "How to do RF-BIST and RF-BiSC with virtually no extra circuits for RF-SoC Products?", D. Webster, J. Lopez, and D.Y.C. Lie, Proc. IEEE 53th MWSCAS, pp. 469-472, Aug. 1-4, Seattle, USA (2010)
39. "An Intelligent Non-Contact Wireless Monitoring System for Vital Signs and Motion Detection", W. Hu, D.Y.C. Lie, R. Ichapurapu, M. U. Kakade, S. Mane, J. Lopez, Y. Li, C. Li, R.E. Banister, A. Dentino, T. Nguyen, S. Zupancic and J. Griswold, Proc. IEEE International Conference of System Science and Engineering (ICSSE), pp. 190-194, Taiwan, July 1-3, 2010
40. **Best Graduate Student Paper Award Winner:** "Efficiency Enhancement and Linearity Trade-Offs for Cascode vs. Common-Emitter SiGe Power Amplifiers in WiMAX Polar Transmitters", Y. Li, J. Lopez, D.Y.C. Lie, K.C.J. Chen, S. Wu and T.Y. Yang, Proc. IEEE International Symposium on Circuits and Systems (ISCAS), pp. 1915-1918, May 30 - June 2, Paris, France (2010)
41. "An Intelligent RFID-Based Hand-Washing Compliance Monitoring System for the Reduction of Nosocomial Infections", S. Mane, J. Lopez, S. Jain, D.Y.C. Lie, S. Dissanaikie, R.E. Banister and J. Griswold, Proc. IEEE International Conference on RFID, Orlando, Florida, April 14-15 (2010)
42. **Best Paper in Poster Session:** "Microwave Noncontact Measurement of Pulse Wave Velocity for Healthcare Applications", L. Li, C. Li and D.Y.C. Lie, Proc. IEEE 11th Annual Wireless and Microwave Technology Conference (WAMICON), Melbourne Beach, Florida, April 12-13 (2010)
43. "MEMS based sensing and algorithm development for fall detection and gait analysis", P. Gupta, G. Ramirez, D. Felty, D.Y.C. Lie, T. E. Dallas, R.E. Banister and A. Dentino, Proc. SPIE, Vol. 7593, 75930U, pp. SPIE Photonics West, San Francisco, CA, Jan. 23-28 (2010) (doi:10.1117/12.841963)
44. "Novel BiST Methods for Parametric Test in WLAN", D. Webster, G. Thiagarajan, S. Ramakrishnan, S. Gunturi, A. Sontakke, and D.Y.C. Lie, Proc. IEEE 10th Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems, pp. 112-115, January 11-13, New Orleans, LA, USA (2010)
45. **Invited paper:** "Design of Highly-Efficient RF Polar Transmitters Using SiGe Power Amplifiers and the Envelope-Tracking (ET) Technique", **D.Y.C. Lie**, Y. Li, and J. Lopez, IEEE Topical Symposium on Power Amplifiers for Wireless Communications, San Diego, CA, September 14-15 (2009)
46. "A De-Cresting Technique Using Envelope-Tracking (ET) and SiGe Power Amplifier for Mobile-WiMAX", Y. Li, D. Meng, J. Lopez, D.Y.C. Lie, K.C.J. Chen, S. Wu and T.Y. Yang, Proc. 2nd Int'l IEEE Conference on

- Microwaves, Communications, Antennas and Electronic Systems (IEEE COMCAS 2009), Tel-Aviv, Israel, Nov. 9-11 (2009)
47. "Automated Epilepsy Diagnosis Using Interictal Scalp EEG", Forrest Sheng Bao, Jue-Ming Gao, Jing Hu, **D.Y.C. Lie**, Yuanlin Zhang and K. J. Oommen, Proc. IEEE 31st Annual Int'l Conf. IEEE Engineering in Medicine and Biology Society (EMBC'09), pp. 6603-6607, Minneapolis, Minnesota, Sept. 2-6 (2009)
 48. "A Low-Cost Custom HF RFID System for Hand Washing Compliance Monitoring", S. Jain Jr., S. Mane, J. Lopez, D.Y.C. Lie, T. Dallas, S. Dissanaik, R.E. Banister and J. Griswold, Proc. IEEE 8th International Conference on ASIC (ASICON09), pp. 975-978, Changsha, China, Oct. 20-23 (2009)
 49. "A 2.4GHz Non-Contact Biosensor System for Continuous Vital-Signs Monitoring on a Single PCB", R. Ichapurapu, S. Jain, M.U. Kakade, **D.Y.C. Lie**, and R.E. Banister, Proc. IEEE 8th International Conference on ASIC (ASICON09), pp. 925-928, Changsha, China, Oct. 20-23 (2009)
 50. **Invited paper:** "Low-Power RF Polar Transmitter Design Using the Envelope-Tracking Technique for WiMAX/WiBro Applications", **D.Y.C. Lie**, Y. Li, J. Lopez, S. Wu and T.Y. Yang, Proc. IEEE 8th International Conference on ASIC (ASICON09), pp. 347-350, Changsha, China, Oct. 20-23 (2009)
 51. "Design of WiMAX/WiBRO Wideband RF Polar Transmitters with on-chip Power Amplifiers Using the Envelope-Tracking Technique", Y. Li, J. Lopez, **D.Y.C. Lie**, K. Chen, S. Wu and T. Yang, Proc. IEEE International Symposium on Circuits and Systems (ISCAS), pp. 2017-2020, May 24-27, Taipei, Taiwan (2009)
 52. "A 2.4GHz Non-Contact Biosensor System for Continuous Vital-Signs Monitoring", R. Ichapurapu, S. Jain, T. Monday, J. Gregory, **D.Y.C. Lie**, R. Banister and J. Griswold, Proc. IEEE 10th Annual Wireless and Microwave Technology Conference (WAMICON), pp. 1-3, Clearwater, FL, USA, Apr. 20- 21 (2009)
 53. "On the Portability and Performance of Fully Monolithic Transformer Structures for RF Power Amplifiers", J. Lopez, **D.Y.C. Lie**, R.B. Staszewski, D. Huang, C.M. Hung, and S. Swaminathan, Proc. IEEE Sixth Dallas Circuits and Systems Workshop (DCAS'08), pp. 103-106, Oct. 19-20, Dallas (2008)
 54. "Automated Recognition and Diagnosis of Epilepsy Using EEG and a Probabilistic Neural Network", F.S. Bao, **D.Y.C. Lie**, and Y. Zhang, Proc. 20th IEEE Int'l Conference on Tools with Artificial Intelligence (ICTAI), pp. 482-486, Dayton, Ohio, USA, November 3-5 (2008)
 55. **Best Student Paper Award Winner:** "A Novel RF Phase Error Built-in-Self-Test for GSM", D. Webster, R. Hudgens, L. Phan, O. Eliezer, and **D.Y.C. Lie**, Proc. IEEE International Conference on Solid-State and Integrated-Circuit Technology (ICSICT), Beijing, pp. 2075-2078, Oct. 20-23 (2008)
 56. "A 65 μ A 8MHz Square Wave Oscillator with LDO Regulator Supply for Improved PSRR", J. Day, P. Vulpoi, D.K. Johnson and **D.Y.C. Lie**, Proc. IEEE International Conference on Solid-State and Integrated-Circuit Technology (ICSICT), pp. 2027 – 2030, Beijing, Oct. 20-23 (2008)
 57. **Invited paper:** "Low-Power RF Wideband Polar Transmitter Design Using the Envelope-Tracking Technique", **D.Y.C. Lie**, Y. Li and J. Lopez, Proc. IEEE International Conference on Solid-State and Integrated-Circuit Technology (ICSICT), pp. 1536 – 1543, Beijing, Oct. 20-23 (2008)
 58. "A Novel Frequency and Phase Tuning Technique for RF Phase Array Antennas Using Fully Monolithic AC-Coupled 1-D Voltage-Controlled-Oscillators Arrays", J. Lopez, **D.Y.C. Lie**, B.K. Meadow, J. Neff and J. Cothorn, Proc. IEEE MILCOM conf., pp. 1-7, San Diego, CA, Nov. 17-19 (2008)
 59. *Not published in the IEEE Xplore® Digital Library:* "Novel Frequency Tuning and Phase Shifting Techniques Using 1-Dimensional Coupled Voltage-Controlled-Oscillator Arrays for Active Antennas" J. Lopez, **D.Y.C. Lie**, B.K. Meadow, J. Neff and J. Cothorn, Proc. IEEE MILCOM conf., San Diego, CA, Nov. 17-19 (2008)
 60. **Invited paper:** "Design of Highly-Efficient Wideband RF Polar Transmitters Using the Envelope-Tracking Technique", **D.Y.C. Lie**, J. Lopez, and Y. Li, Proc. IEEE Bipolar/BICMOS Circuits and Technology Meeting (BCTM), Monterey, CA, Oct. 13-16 (2008)
 61. "Experimental Investigations and Behavior Modeling for Monolithic Quasi-Class E SiGe PA Linearization", Y. Li, J. Lopez, **D.Y.C. Lie**, and J.D. Popp, Proc. IEEE International Conference on Communications, Circuits and Systems (ICCCAS), pp. 1476-1480, May 25-27, Xiamen, China (2008)
 62. **2nd Place Winner for Best Student Paper Competition:** "Impact of Power Cell Design on RF Performance of CE and CB SiGe Power HBTs", G. Qin, Z. Ma, J. Lopez, and **D.Y.C. Lie**, IEEE Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (SiRF'08), pp. 66-69, January 23-25, Orlando, FL, USA (2008)
 63. "A Fully-Integrated Highly-Efficient RF Class E SiGe Power Amplifier with an Envelope-Tracking Technique for EDGE Applications", **D.Y.C. Lie**, J. D. Popp, F. Wang, D. Kimball, and L.E. Larson, Proc. IEEE Sixth Dallas Circuits and Systems Workshop (DCAS'07), pp. 39-42, Nov. 15-16, Dallas (2007)
 64. **Invited paper:** "The Design of Highly Efficient Monolithic Class E SiGe Power Amplifiers", **D.Y.C. Lie**, J. Lopez, Proc. The 7th International Conference on ASIC (ASICON), Guilin, China, Oct. 26-29 (2007)

65. "The Design of Nonlinear Oscillator Array for Active Antenna", J. Cothorn, J. Neff, B.E. Meadows, T. Heath, and D.Y.C. Lie, Proc. International Conference on Applications in Nonlinear Dynamics (ICAND'07), Poipu Beach, Koloa (Kauai), Hawaii, September 24-27 (2007) *Not published in the IEEE Xplore® Digital Library:*
66. "Highly Efficient Class E SiGe Power Amplifier Design for Wireless Sensor Network Applications", **D.Y.C. Lie**, J. Lopez, and J. F. Rowland, Proc. IEEE Bipolar/BICMOS Circuits and Technology Meeting (BCTM), pp. 160-163, Boston, MA, Sept. 30–Oct. 2 (2007)
67. "Highly Efficient and Linear Class E SiGe Medium Power Amplifier Design" **D.Y.C. Lie**, J. Lopez, J.F. Rowland, J.D. Popp, A. Yang, A Hurtado, G. Wang, H. Li, J. Park, and Z. Ma, Tech. Dig. IEEE Topical Symposium on Power Amplifiers for Wireless Communications, 5.1., January 8-9, Long Beach, CA (2007)
68. "Highly Efficient and Linear Class E SiGe Medium Power Amplifier Design for Wireless Sensor Network Applications", **D.Y.C. Lie**, J. Rowland, J. Lopez, J. Popp, A. Hurtado, A. Yang, N. Kamin and N. Chen, Proc. Government Microcircuit applications and Critical Technology Conference (GOMAC), Mar 19-22, Lake Buena Vista, FL (2007)
69. "Minimum Noise Figure of SiGe HBTs under Different Operation Configurations", H Li, G. Wang, G. Qin, Z. Ma, G. Niu, and **D.Y.C. Lie**, Digest of Papers, IEEE Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (SiRF'07), pp. 56-59, January 10-12, Long Beach, CA (2007)
70. "Influences of Device Size on Small- and Large-Signal Performance of SiGe Power HBTs", G. Wang, J. Park, H. Li, Z. Ma, **D.Y.C. Lie**, J. Lopez, and A. M. Hurtado, Proc. IEEE International Conference on Solid-State and Integrated-Circuit Technology (ICSICT), pp. 188-191, Shanghai, China, Oct. 23-26, (2006)
71. **Invited paper:** "Highly Efficient and Linear Class E SiGe Power Amplifier Design", **D.Y.C. Lie**, J. Popp, J. Rowland, A.H. Yang, F. Wang, and D. Kimball, Proc. IEEE International Conference on Solid-State and Integrated-Circuit Technology (ICSICT), pp. 1526-1529, Shanghai, China, Oct. 23-26, (2006)
72. **Invited paper:** "An Omni-Directional Comparison between Common-Emitter and Common-Base SiGe Power HBTs", G. Wang, H.-C. Yuan, Z. Ma, and **D.Y.C. Lie**, Proc. IEEE International Conference on Solid-State and Integrated-Circuit Technology (ICSICT), pp. 182-185, Shanghai, China, Oct. 23-26, (2006)
73. **Invited paper:** "Wideband Monolithic Highly-Efficient and Linear Class E Power Amplifiers Design Using High- f_T vs. High-Breakdown SiGe HBTs", **D.Y.C. Lie**, J. Popp, P. Lee, A.H. Yang, J. Rowland, and F. Wang, Proc. Tech. Dig. IEEE VLSI-DAT Conference, Hsin-Chu, Taiwan, pp.79-82, April 26-28 (2006)
74. "Circuit and System Design for a Homodyne W-CDMA Front-End Receiver RF IC", **D.Y.C. Lie**, J. Kennedy, D. Livezey, B. Yang, T. Robinson, N. Sornin, and L.E. Larson, Proc. Tech. Dig. IEEE VLSI-DAT Conference, Hsin-Chu, Taiwan, pp. 25-28, April 26-28 (2006)
75. "RF Power Efficiency Improvement by using Linearized SiGe Class E Power Amplifiers for Joint Tactical Radio System Applications", J.D. Popp, **D.Y.C. Lie**, F. Wang, and D. Kimball, Tech. Dig. Government Microcircuit applications and Critical Technology Conference (GOMAC), Mar. 20-23, San Diego, CA (2006)
76. **Invited paper:** "A Fully-Integrated Highly-Efficient RF Class E SiGe Power Amplifier with an Envelope-Tracking Technique for EDGE Applications", J. D. Popp, **D.Y.C. Lie**, F. Wang, D. Kimball, P. Asbeck and L.E. Larson, Dig. IEEE Radio and Wireless Symposium (RWS), pp. 231–234, San Diego, Jan. 17-19 (2006)
77. **3rd Place Winner for Student Paper Competition:** "A Low-Voltage 12GHz VCO in 0.13 μ m CMOS for OFDM Applications", Yiping Han, L. E. Larson and **D.Y.C. Lie**, Dig. IEEE SiRF conference, pp. 379-382, San Diego, Jan. 18-20, CA (2006)
78. "On-Chip Monolithic Filters for Receiver Interference Suppression using Bond-Wire Inductors", Himanshu Khatri, L.E. Larson, and **D.Y.C. Lie**, Dig. IEEE SiRF conf., pp.166-169, Jan. 18-20, San Diego, CA (2006)
79. "The Design and Modeling of High Quality Factor Integrated Inductors in Novel Transfer SOI CMOS 0.5 μ m Technology", J. F. Rowland, **D. Y. C. Lie**, J. D. Popp, Bi-Annual Research Review Digest, Space and Naval Warfare Systems Center (SPAWAR), San Diego, CA (2006)
80. "Wideband Envelope Elimination and Restoration Power Amplifier with High Efficiency Wideband Envelope Amplifier for WLAN 802.11g Applications", F. Wang, D. Kimball, J. Popp, A. Yang, **D.Y.C. Lie**, P. Asbeck and L.E. Larson, Proc. IEEE Int'l Microwave Symposium (IMS), June 12-15, Long Beach, CA (2005)
81. "What Comes After Most Semiconductor Fabs Are 'OutSourced' to Asia? The Major Challenges In Educating Future RF/Analog IC Designers in the U.S." **D.Y.C. Lie**, Proc. IEEE Int'l Conference on Microelectronic Systems Education, Anaheim, pp. 63-64, CA June 12-13 (2005)
82. "The Limitations in Applying Analytic Design Equations for Optimal Class E RF Power Amplifiers Design", **D.Y.C. Lie**, P. Lee, J. Popp, J. Rowland, H. H. Ng, and A. Yang, Proc. Tech. Dig., IEEE Int'l Symp. on VLSI Design, Automation, and Test (VLSI-TSA-DAT), pp. 161-164, Hsin-Chu, Taiwan, April 27-29 (2005)

83. "High Efficiency RF Class E Power Amplifiers for Unattended Ground Sensor Applications", J. D. Popp, **D.Y.C. Lie**, J.F. Rowland, and A.H. Yang, Tech. Dig. Government Microcircuit applications and Critical Technology Conference (GOMAC), Apr. 4-7, Las Vegas, NV (2005)
84. "Phase Noise Analysis of Fully-Integrated Digitally-Tuned Wideband Si/SiGe BiCMOS VCOs", **D.Y.C. Lie**, X. Yuan, L.E. Larson, T. Robinson, A. Senior, X. Wang, J. Mecke and M. Case, Proc. IEEE Bipolar/BICMOS Circuits and Technology Meeting (BCTM), Monterey, CA, pp. 65-68, Sept. 29–Oct. 01 (2002)
85. "A Direct-Conversion W-CDMA Front-End SiGe Receiver Chip", **D.Y.C. Lie**, J. Kennedy, D. Livezey, B. Yang, T. Robinson, N. Sornin, T. Beukema, L.E. Larson, A. Senior, C. Saint, J. Blonski, N. Swanberg, P. Pawlowski, D. Gonya, X. Yuan, and H. Zamat, Proc. IEEE Radio Frequency IC Symposium (RFIC), Seattle, Washington, USA, pp. 31-35, June 2-4, (2002)
86. *Invited paper for plenary session*: "RF-SoC: Low-Power Single Chip Radio Design Using the Si/SiGe BiCMOS Technology", **D.Y.C. Lie**, X. Yuan, L.E. Larson, A. Senior and J. Mecke, Proc. IEEE 3rd Int'l Conf. on Microwave and Millimeter Wave Technology (ICMMT2002), Beijing, China, August 18-21, (2002)
87. "RF Linearity Study of SiGe HBTs for Low Power RFIC Design, Part I", X. Yuan and **D.Y.C. Lie**, Proc. IEEE 3rd Int'l Conf. on Microwave and Millimeter Wave Tech. (ICMMT2002), Beijing, China, August 18-21, (2002)
88. "RF Linearity Study of SiGe HBTs for Low Power RFIC Design, Part II", X. Yuan and **D.Y.C. Lie**, Proc. IEEE 3rd Int'l Conf. on Microwave and Millimeter Wave Tech. (ICMMT2002), Beijing, China, August 18-21, (2002)
89. *Invited paper*: "How can RF IC designers benefit from Si/SiGe HBTs? From Device Physics to RF Circuit Design", **D.Y.C. Lie** and X. Yuan, Proc. 9th Int'l Symp. on Integrated Circuits, Devices & Systems (ISICDS), pp. 3-7, Sept.3, Singapore, (2001)
90. "Device selection for low noise amplifier (LNA) type of circuit design in IBM SiGe technology", X. Yuan and **D.Y.C. Lie**, Proc. 9th Int'l Symp. Integrated Circuits, Devices & Systems, pp. 8-11, Sept.3, Singapore, (2001)
91. "New experimental findings on process-induced hot-carrier degradation effects of deep-submicron N-MOSFETs", **D.Y.C. Lie**, J. Yota, W. Xia, A.B. Joshi, R. Williams, R. Zwingman, L.C. Chung, and D.L. Kwong, Proc. IEEE Int. Reliability Phys. Symp. pp.362-369 (IRPS), San Diego (1999)
92. "Hot-carrier degradation effects for deep-submicron NMOSFETs introduced by backend processing" **D.Y.C. Lie**, Wei Xia, J. Yota, A.B. Joshi, R. Zwingman, R. Williams, C.L. Wang, V. Kerametlian, D. Cerney, and D.L. Kwong, Proc. SPIE Devices Technology, 3212, 258 (1997)
93. "The influence of transient-enhanced diffusion (TED) on the anomalous increase of body constant for deep sub-micron buried-channel PMOSFETs," **D.Y.C. Lie**, Mat. Res. Soc. Symp. abstract E1.3, April 1, (1997)
94. *Student Paper Contest Finalist* "Solid phase epitaxial regrowth and dopant activation of arsenic-implanted metastable pseudomorphic $\text{Ge}_{0.08}\text{Si}_{0.92}$ and $\text{Ge}_{0.16}\text{Si}_{0.84}$ on Si(100)," **D.Y.C. Lie**, J.H. Song, M-A. Nicolet, N.D. Theodore, J. Candelaria, S.G. Thomas, M.O. Tanner, and K.L. Wang, Mat. Res. Soc. Symp. Proc. 379, 467 (1995)
95. "Microstructure of oxidized $\text{Ge}_{0.8}\text{Si}_{0.2}$ annealed in a reducing ambient," N.D. Theodore, W.S. Liu, **D.Y.C. Lie**, M-A. Nicolet, T.K. Carns and K.L. Wang, Mat. Res. Soc. Symp. Proc. 379, 127 (1995)
96. "The influence of impurities on the properties of the chromium/gold and chromium nitride/gold structures," **D.Y.C. Lie**, E. Kolawa, R. De Angelis, L. Lowry, and J. Scott-Monck, Mat. Res. Soc. Symp. Proc. ULSI-IX, 583 (1994)
97. "Dopant activation and epitaxial regrowth in P-implanted pseudomorphic $\text{Ge}_{0.12}\text{Si}_{0.88}$ layers on Si(100)," **D.Y.C. Lie**, F. Eisen, M-A. Nicolet, N.D. Theodore, T.K. Carns, and K.L. Wang, Mat. Res. Soc. Symp. Proc. 321, 485 (1994)
98. *Student Paper Contest Award Winner* "Steady-state versus rapid-thermal annealing of phosphorus implanted pseudomorphic Si(100)/ $\text{Ge}_{0.12}\text{Si}_{0.88}$," **D.Y.C. Lie**, J.H. Song, N.D. Theodore, F. Eisen, M-A. Nicolet, T.K. Carns, and K.L. Wang, Mat. Res. Soc. Symp. Proc. 342, 51 (1994)
99. "Damage and strain in epitaxial $\text{Ge}_{0.10}\text{Si}_{0.90}$ after Si implantation from 40 to 150 °C," A. Vantomme, J. H. Song, **D.Y.C. Lie**, F. Eisen, M-A. Nicolet, T.K. Carns, and K.L. Wang, Mat. Res. Soc. Symp. Proc. 326, 121 (1994)
100. "Generation of defects and strain by Si ion implantation in Ge(100) single crystals, and in pseudomorphic $\text{Ge}_x\text{Si}_{1-x}$ films grown on Si(100)," **D.Y.C. Lie**, A. Vantomme, F. Eisen, M-A. Nicolet, V. Arbet-Engels, and K.L. Wang, Mat. Res. Soc. Symp. Proc. 262, 1079 (1993)
101. "Electrical and material properties of heavily doped pseudomorphic $\text{Ge}_{0.12}\text{Si}_{0.88}$ films by ^{31}P ion implantation," **D.Y.C. Lie**, A. Vantomme, F. Eisen, M-A. Nicolet, T.K. Carns, and K.L. Wang, Proc. SRC-Techcon, 552, Atlanta, GA, September, 28-30 (1993)

102. "Epitaxial $\text{Ge}_x\text{Si}_{1-x}$ films on Si: (1) oxidation and nitridation of $\text{Ge}_x\text{Si}_{1-x}$, (2) Ion implantation of $\text{Ge}_x\text{Si}_{1-x}$," M-A. Nicolet, **D.Y.C. Lie**, W.S. Liu, and A. Vantomme, Proc. 14th Solid State Phys. Symp. Semicon. Surf. Metal-Semicon. Interface, 1 (1992)

(IV) Magazine Articles and Internet Publicity

1. Blessings Magazine 恩福雜誌, Vol. 22 2007 "達爾文進化論可信嗎? Is Darwinian Evolutionism Believable?" <http://www.bf21.org/magazine.aspx?id=badbf546-bc2f-4f5f-867d-c14e73e754b1&BookID=22>
2. "Monitoring Vital Signs: Wireless Medical Sensors", **D.Y.C. Lie**, *Envision*, the Annual Research Magazine of College of Engineering, Texas Tech University, p. 14, Lubbock, Texas (2008)
3. TTUHSC *Pulse* Magazine Winter 2012 "Discoveries" on novel fall prevention/detection devices with TTUHSC doctors (pp. 14-18)
4. Featured in a Texas Instruments (TI) question and answer blog. at the TI E2E™ Community http://e2e.ti.com/blogs_/b/aroundti/archive/2012/04/30/braking-the-fall-ti-part-of-a-research-study-aimed-at-keeping-elderly-safe.aspx as a result of partnering with TI and made a Fall Detection Device on a research study aimed at the early detection and prevention of falls in elderly people. This device could significantly reduce falls in the geriatric population in the future.
5. Featured on the *EETimes* "MEMS project aims to prevent elderly from falling" <http://www.embedded.com/electronics-news/4372785/MEMS-project-aims-to-prevent-elderly-from-falling>
6. Featured in a special interview by the [Hospitals & Health Networks Magazine](#) on our fall detection/prevention sensor. *H&HN* is the flagship publication of the American Hospital Association and the most trusted and credible management publication in the field (started in 1927). It is the leading publication for hospital and system executives, and it continues its history of journalistic excellence by capturing more national editorial and design awards than any other healthcare management magazine.

(V) Patents

1. "Low-power, low-noise dual gain amplifier topology and method"; **D.Y.C. Lie** and L.E. Larson; US Patent #5565690.
2. "Methods of doping strained-layer heterostructures devices"; **D.Y.C. Lie et al.**, US Patent #6396347.
3. "A novel way of maximizing the output power efficiency for Switch-mode RF Power Amplifiers", **D.Y.C. Lie** and J. Popp., US patent 7,205,835 (issued 17 April 2007)
4. "An Improved Open-Loop Method to Perform RF Transmitter Output Power Control and high efficiency for Switching-Mode Power Amplifier; Part I", **D.Y.C. Lie** and J. Popp., US patent #7420421 B1 (issued 2 Sept. 2008)
5. "An Improved Open-Loop Method to Perform RF Transmitter Output Power Control and high efficiency for Switching-Mode Power Amplifier; Part II", **D.Y.C. Lie** and J. Popp., US patent #7,593,702, issued on 22 September 2009
6. "Novel Frequency Tuning and Phase Shifting Techniques Using 1-Dimensional Coupled Voltage-Controlled-Oscillator (VCO) Arrays for Active Antennas Applications", **D.Y.C. Lie**, J. Lopez, J. Neff, J. Cothorn and B. Meadows, US patent disclosure filed to US patent office.
7. "CMOS IC for micro-emitter based microdisplay", J. Day, J. Li, **D.Y.C. Lie**, Z. Fan, J.-Y. Lin, and H.-X. Jiang, submitted to US patent office, 2011
8. Several other patent applications filed with Texas Tech OTC (Office of Technology Commercialization) and pending to be filed to US Patent Office.
 - a. "Miniaturized non-contact cyber-enabled biosensor SoC with beam-steering capabilities for continuous vital-signs and motion monitoring", Donald Lie and R. Banister, Provisional patent application filed 10/14/2009, Application Number: 61251700
 - b. "A Low-Cost Hybrid RFID system for Handwashing Monitoring", Y.C. Donald Lie, R. Banister, and Dissanake, Sharmilla, Provisional patent application filed 02/18/2011

(VI) Invited Short Courses, Tutorials, Workshops, Panel Presenter, etc.

- Half-Day Tutorial, IEEE APCCAS 2012 (Asia Pacific Conference on Circuits and Systems, in Kaohsiung, Taiwan on Dec. 2, 2012). Title of the tutorial: "Design of High-Efficiency Silicon-Based Power Amplifier and Transmitters ICs for Mobile Broadband Wireless Communications".

- Invited talk: “Design of Si-Based High-Efficiency RF Power Amplifiers and Transmitters Using Envelope-Tracking for Mobile Broadband Wireless Communications”, CMOS Emerging Technologies Meeting (Communications, Microsystems, Optoelectronics and Sensors), July 18-20, Vancouver, BC, Canada (2012)
- Invited by the National Science Council (NSC), Taiwan and presented a talk at the Dept. of Electrical Engineering, National Cheng Kung University (NCKU), Tainan, Taiwan, April 26, 2012, Lecture title: “Monolithic Envelope Tracking Power Amplifier (ET-PA) for Broadband Wireless”
- Invited and presented a Seminar on “Design of SiGe High-Efficiency RF Power Amplifier for Broadband Wireless Communications” at RichWave Technology Corp., Taipei, Taiwan, April, 24, 2012
- Invited by the IEEE Solid-State Circuits Society (SSC), Taipei Chapter and presented a talk at the Dept. of Electronic Engineering, National Chiao Tung University (NCTU), sponsored, April 23, 2012, Hsin-Chu, Taiwan, Lecture title: “A Monolithic 1.85GHz 2-Stage SiGe Power Amplifier with Envelope Tracking for Improved Linear Power and Efficiency”
- Invited as one of the distinguished lecturers at IEEE CASS (Circuits and Systems Society) Summer School Aug. 29 – Sep. 2, 2011 at Dept. of EE, National Sun Yat-Sen University, Kaohsiung, Taiwan, website: http://vlsi.ee.nsysu.edu.tw/sschool_2011/ Lecture title: “Design of High-Efficiency Si-Based Power Amplifier and Transmitters ICs for Mobile Broadband Wireless Communications”. The first IEEE CASS Summer School aims to provide both an objective and clear overview and an in-depth analysis of the state-of-the-art research on a variety of circuit, architecture, and system designs delivered by distinguished experts in these fields.
- Invited and presented a *keynote speech* titled “Design of Highly-Efficient Si-Based Transmitter ICs for Mobile Broadband Wireless Communications and Sensors Applications” at the 9th IEEE International NEWCAS Conference held in Bordeaux, France, on June 26 - 29, 2011 at the Mercure cité mondiale Hotel. This edition of IEEE NEWCAS Conference is organized by researchers from the University of Bordeaux, with support from The Strategic Alliance for Microsystems Research of Quebec (Canada). The wide range of topics has attracted a new record number of 298 paper submission with a 44% acceptance rate.
- Invited and presented a talk at Taiwan’s CIC (Chip Implementation Center), April 25, 2011 on “Highly Power-Efficient Silicon-Based RF Power Amplifier Design”
- Invited to present in an IEEE Workshop on “Design of Si-Based High-Efficiency RF Power Amplifiers and Polar Transmitters for Mobile Broadband Wireless Communications”, IEEE RFIC Symp./IMS Workshop WSK: “Efficiency Enhancement Techniques of Power Amplifiers and Transmitters for Mobile Applications” on Sunday June 5, 2011, Baltimore, MD, 2011
- Selected to be a presenter at the 2011 WBT Innovation Marketplace in Arlington, Texas on our technology named "An Intelligent RFID-Based Handwashing Compliance Monitoring and Prompting System for the Food Industry and the Healthcare Industry", March 22-23, 2011, developed at Texas Tech through the Texas Tech OTC (Office of Technology Commercialization)
- Invited and presented an 1-day Short Course on “Design of Si-Based High-Efficiency RF Power Amplifiers and Polar Transmitters for Mobile Broadband Wireless Communications” as a IEEE JSSC Short Course, invited by IEEE Solid-State Circuits Society, Taipei Chapter, Taiwan, July 23, 27, 2010
- Invited and presented a Short Course on “Design of Si-Based High-Efficiency RF Low-Noise Amplifier (LNA) and Polar Transmitters for Mobile Broadband Wireless Communications” in RichWave Technology Corp., Taipei, Taiwan, July, 20, 2010
- Invited and presented in the special evening session on “Can RF SoCs (Self) Test Their Own RF?” for IEEE International Conference on Solid-State Circuits Conference (ISSCC’10), San Francisco, CA., Feb. 9, 2010
- Invited and gave an IEEE RWS Workshop talk on “Design of Highly-Efficient RF Polar Transmitters Using SiGe Power Amplifiers and the Envelope-Tracking (ET) Technique”, IEEE SiRF’10, New Orleans, LA, Jan. 11-13, 2010 (Workshop on “Advances in SiGe BiCMOS Technology and Circuits for Communication”)
- Invited and presented a 2-day Short Course on “Design of Si-Based High-Efficiency RF Low-Noise Amplifier (LNA), Power Amplifier (PA) design and Polar Transmitters for Mobile Broadband Wireless Communications” in SiGe Semiconductor Inc., Aug. 11, Boston, MA, 2009
- Invited and gave a Workshop on “SiGe PA Design for WLAN/WiMAX and Handset Applications”, IEEE RFIC Symp. Workshop WSF “Devices and Design Techniques for Advanced Handset/Mobile PAs”, June 7, Boston, MA, 2009
- Invited and gave a Short Course on “RF Amplifier and Si-Based PA: Analog/RF IC Design and Technologies for Communications” for IEEE International Conference on Solid-State and Integrated-Circuit Technology

(ICSICT), Beijing, Oct. 20, 2008. The lecture provides an in-depth review of RF low-noise amplifier design and Si-based power amplifier implementation. Design constraints and tradeoffs between noise, efficiency, linearity and power are addressed with the consideration of technology options and improved design techniques.

- Invited and lectured a 2-day short course on “RFIC Design Fundamentals and Techniques for RF-SoC Applications”, sponsored by the National Ministry of Education, The National Innovative Communication Education Program, Taiwan, at National Chiao-Tung University, Hsin-Chu, Taiwan, Aug. 23-24, 2004.
- Invited talks on “RF-SoC design” at National Chiao-Tung University and National Chung-Hsing University, Dept. of Electronic Engineering, Taiwan, Oct., 2003.
- Other Invited talks on “Si-Based RF SiGe PA Design”, NTUEE, NHTU, NCTU, 2006; NCKU, NCTU, 2007; “RF-SoC Design”, ECE294 Seminar, UCSD, 2004 (invited by Prof. Yuhwa Lo); ASU, 2002 (invited by Prof. S. Kiaei), “Doping and Ion Implantation in Si/SiGe”, UCSD, 1996 (invited by Prof. S.S. Lau)

(V) Editorial Experience

Associate Editor, IEEE Microwave and Wireless Components Letters (MWCL); 2010-present (impact factor 2.3, acceptance rate 18-30%)

Guest Editor, IEEE Journal of Solid-State Circuits (JSSC), Sept. 2009

Editorial Board Member, i-manager’s Journal on Electrical Engineering, 2009-present

Editorial Board Member, Open Journal of Applied Biosensor (OJAB), 2012-present www.scirp.org/journal/ojab

Special Topic Editor, IEEE Microwave and Wireless Components Letters (MWCL) in June 2012

Area Editor-in-Chief for International Journal on Wireless and Optical Communications, 2001-present