

Curriculum Vitae

Lan-Da Van (范倫達)

Title Associate Professor; SMIEEE
Birthday Oct. 09, 1972.
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[Google Citations](#)



Education

Ph.D., Electrical Engineering, National Taiwan University, Taiwan. (1997/09 ~ 2001/06)
M.S., Electrical Engineering, Tatung Institute of Technology^{*1}, Taiwan. (1995/09 ~ 1997/06)
B.S. (Honors), Dept. of Electrical Engineering, Tatung Institute of Technology^{*1}, Taiwan. (1991/09 ~ 1995/06)

*1: Tatung Institute of Technology has renamed as Tatung University in 1999, Taipei, Taiwan.

Experience

Deputy Director, NCTU M2M/IoT Deep Plowing R&D Center (College Level), National Chiao Tung University, Taiwan. (2015/08 ~ Present)
Associate Professor, Department of Computer Science, National Chiao Tung University, Taiwan. (2011/08 ~ Present)
Assistance Professor, Department of Computer Science, National Chiao Tung University, Taiwan. (2006/02 ~ 2011/07)
Deputy Department Manager, National Chip Implementation Center (CIC), Taiwan. (2004/02 ~ 2006/01)
Associate Researcher, National Chip Implementation Center (CIC), Taiwan. (2001/10 ~ 2006/01)

Research Field

VLSI algorithms, architectures, and chips for digital signal processing and biomedical signal processing. This includes the design of low-power/ high-performance/ cost-effective 3-D graphics system, adaptive/learning systems, computer arithmetic, multi-dimensional filter, transforms and the design of IoT/M2M system applications.

Teaching

- 1) 3D Biomedical Graphics Electronic System Application Projects (Co-teach with other professors) (Fall: 2012, 2013).
- 2) Graphics Processing Architecture and System Design (Spring: 2013; Fall: 2011, 2014).
- 3) VLSI Digital Signal Processing (Spring: 2006, 2007, 2010; Fall: 2008, 2010, 2015).
- 4) VLSI Design (Fall: 2007).
- 5) Introduction to VLSI and SOC Design (Spring: 2008; Fall: 2008, 2009, 2013).
- 6) Digital System Design (Spring: 2009, 2011, 2012, 2014, 2015, 2017).
- 7) Digital Circuit Design (Spring: 2017; Fall: 2007, 2009, 2010, 2011, 2012).
- 8) Digital Circuit Laboratory (Fall: 2014).

Activity

- 1) **Associate Editor/Guest Editor**
 - IEEE Transactions on Computers (Associate Editor, Oct. 2014~present).

- Journal of Medical Imaging and Health Informatics (Associate Editor, Oct. 2014~present, SCI-IF (2015): 0.877).

- Journal of Medical Imaging and Health Informatics (Guest Editor, Special Issue on April 2015, with Prof. Z. Zhang).

Special Issue Title: Advanced Signal Processing Technologies and Systems for Healthcare Applications

2) Organizing Committee

- International Conference on Communications, Computing, Control and Automotive Technologies (Advisory Board and Technical Board Committee, 2018, sponsored by IEEE).

- IEEE International Conference on Digital Signal Processing (DSP) (Special Session Co-Chair, 2018).

- NCTU Forum of Technology and Application of Internet of Things (Program Co-Chair, 2016).

- 22nd IFIP/IEEE International Conference on Very Large Scale Integration VLSI-SoC 2014 ("Embedded Systems and Processors, Hardware/Software Codesign" track, Track Co-Chair, 2014).

- IEEE Taipei Section (Officer, 2009~2010).

- IEEE National Taiwan University (NTU) Student Branch (Chairman, 2000).

3) Technical/Program Committee Member

- IEEE International Symposium on Circuits and Systems (ISCAS) (VLSI Systems and Applications TC Member, 2010~2017).

- IEEE International Symposium on Circuits and Systems (ISCAS) (Circuits and Systems for Communications TC Member, 2010~2017).

- IEEE International Symposium on Circuits and Systems (ISCAS) (Nanoelectronics and Gigascale Systems TC Member, 2008~2017).

- 1st New Generation of Circuits and Systems (NGCAS) Conference 2017 (PC Member, 2017, sponsored by IEEE).

- IEEE International NEW Circuits and Systems (NEWCAS) conference (PC Member, 2015).

- International Conference on Information, Communications and Signal Processing (ICICS) (TPC Member, 2015, sponsored by IEEE).

- International Conference on Green Circuits and Systems (ICGCS) (TPC Member, 2010, sponsored by IEEE).

- International Conference on Multimedia and Ubiquitous Engineering (MUE) (PC Member, 2008).

- VLSI Design/CAD Symposium (TPC Member, 2008~2012).

- National Computer Symposium (TPC Member, 2007).

4) Special Session Organizer

- IEEE International Conference on Digital Signal Processing (DSP) (2015).

Session Title: Advanced Techniques and Architecture for GPU Systems

- International Conference on Information, Communications and Signal Processing (ICICS) (2013, sponsored by IEEE).

Session Title: Advanced Biomedical Signal Processing Systems and 3D Multimedia System

- International Conference on Green Circuits and Systems (ICGCS) (2010).

Session Title: Green Technologies for Reliable Circuits and Advanced Systems

- IEEE International Conference on Circuits and Systems (ISCAS) (2009).

Session Title: Design Methodologies for Reliable Nanoscale Devices/Circuits and Advanced Gigascale/SOC Systems (with Prof. C. T. Chiu)

5) Session Chair/Co-Chair

- IEEE International Conference on Digital Signal Processing (DSP) (2015).

- International Conference on Information, Communications and Signal Processing (ICICS) (2013).

- IEEE International Conference on Circuits and Systems (ISCAS) (2008~2012, 2014~2017).

- International Conference on Green Circuits and Systems (ICGCS) (2010).

- National Computer Symposium (2007).

- IEEE International Conference on Systems, Man, and Cybernetics (SMC) (2006).
- VLSI Design/CAD Symposium (2005~2006, 2008, 2010~2014).

6) Reviewer of International Journal (Over 100 Journal Papers without counting the revised submissions)

- IEEE Access (2015).
- IEEE Embedded Systems Letters (2013).
- IEEE Signal Processing Letters (2003, 2006, 2007).
- IEEE Signal Processing Magazine (2016).
- IEEE Transactions on Biomedical Circuits and Systems (2015).
- IEEE Transactions on Circuits and Systems I: Regular Papers (2002, 2004, 2005, 2007~2012).
- IEEE Transactions on Circuits and Systems II: Express Briefs (2002, 2004, 2006~2013).
- IEEE Transactions on Circuits and Systems for Video Technology (2007).
- IEEE Transactions on Computers (2006, 2007, 2010, 2011, 2014).
- IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (2011, 2017).
- IEEE Transactions on Multimedia (2002, 2003, 2007, 2008, 2012).
- IEEE Transactions on Multi-Scale Computing Systems (2016).
- IEEE Transactions on Parallel and Distributed Systems (2013).
- IEEE Transactions on Signal Processing (2006, 2007).
- IEEE Transactions on VLSI Systems (2004~2009, 2011, 2013~2015, 2017).
- ACM Transactions on Design Automation of Electronic Systems (2011).
- Asian Journal of Control (2008).
- ASP - Journal of Medical Imaging and Health Informatics (2014).
- Elsevier - Computer and Electrical Engineering. (2009)
- Elsevier - Integration, The VLSI Journal (2004, 2012, 2013, 2015, 2017).
- Elsevier - Microelectronics Journal (2003, 2013).
- EURASIP Journal on Applied Signal Processing (2003).
- IEE Proceedings - Computers and Digital Techniques (2006).
- International Journal of Electrical Engineering (IJEE) (2008, 2011).
- Journal of Information Science and Engineering (JISE) (2007, 2010).
- Journal of the Chinese Institute of Engineers (2013).
- Springer - Circuits, Systems, and Signal Processing (2016, 2017).
- Springer - Journal of Signal Processing Systems (2010, 2013, 2015).
- Wiley - International Journal of Circuit Theory and Applications (2008).

7) Reviewer of International Conferences:

- IEEE Asia Pacific Conference on Circuits and Systems (APCCAS).
- IEEE Biomedical Circuits and Systems Conference (BIOCAS).
- IEEE Global Communications Conference (GLOBECOM) - Symposium on Selected Areas in Communications.
- IEEE International Conference on Communications (ICC) - Signal Processing for Communications Symposium.
- IEEE International Conference on Electronics, Circuits, and Systems (ICECS).
- IEEE International Conference on Multimedia and Expo (ICME).
- IEEE International Midwest Symposium on Circuits and Systems (MWSCAS).
- IEEE International Symposium on Circuits and Systems (ISCAS).
- IEEE International Symposium on High Performance Computer Architecture (HPCA).
- IEEE TENCON.
- IEEE Workshop on Signal Processing Systems (SiPS).
- IMEKO IWADC 2011 and IEEE ADC Forum.
- International Conference on Green Circuits and Systems (ICGCS).
- International Conference on Information, Communications and Signal Processing (ICICS).
- International Conference on Intelligent Transport Systems Telecommunications (ITST).

- International Symposium on Integrated Circuits (ISIC).

8) Referee of Promotion

- Assistant Professor Promotion in Taiwan x1 (2016).

9) Referee of International Project

- The Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO) (2016).

10) Referee of National Project

- Ministry of Education (MOE) - Intelligent Electronics Talent Cultivation Program - Multi-core Advanced Lab Modules and Course Promotion (Aug. 15, 2016). [Chinese: 多核心精進模組組合之課程(AT-04)與多核心系統相關課程提升(AT-05)-期末書面報告審查]
- Ministry of Education (MOE) - Intelligent Electronics Talent Cultivation Program - Multi-core Advanced Lab Modules and Course Promotion (Mar. 21, 2016). [Chinese: 多核心精進模組組合之課程(AT-04)與多核心系統相關課程提升(AT-05)-期中簡報審查]
- Ministry of Science and Technology (MOST) (2014, 2015, 2017). [<https://www.most.gov.tw/>]
- Ministry of Education (MOE) - Intelligent Electronics Talent Cultivation Program - 4C Electronics - Intelligent Electronics Cross-Fields Application Course Program (2013). [<http://www.edu.tw/>]
- National Science Council (NSC) (2008, 2009, 2010). [<https://www.most.gov.tw/>]
- Ministry of Economic Affairs (MOEA) (2007, 2015). [<http://www.moea.gov.tw/MNS/populace/home/Home.aspx>]

11) Referee of National Contest

- NTHU-國立清華大學資訊工程學系大學部專題展決賽評審委員 (Dec. 12, 2014).
- MOE - Intelligent Electronics Design Contest (2014(初賽), May 10, 2014 (決賽), Chinese: 智慧電子系統設計競賽).
- Intel Taiwan Intelligent Systems Design Student Contest (2012/10/02).
- TICD Thesis Award (2008).
- National Silicon IP Contest (2003~2007).
- ARM Code-O-RAMA Design Contest (2007, 2009, Apr. 2014(初賽), May 16, 2014 (決賽)).
- CIC Chip Design Award (2007, 2010).
- MXIC Golden Silicon Awards (2006).
- SoC Design Contest (2004).

12) Consultant

- Technology Licensing Office, National Chiao Tung University (2014). [Chinese: 技術顧問]
- National Chip Implementation Center (CIC) (2006/02/01~2006/12/31).

13) Demo Invitation:

- Make Faire Taipei, Taipei, Taiwan, May 2016.
- Intel Asia Innovation Summit, Taipei, Taiwan, 2015.
- Intel Asia Innovation Summit, Taipei, Taiwan, 2014.

14) Examiner/Referee of Dissertation/Thesis:

- Chang Gung University, Taiwan (Ph. D. Dissertation).
- National Cheng Kung University, Taiwan (Master Thesis).
- National Chiao Tung University, Taiwan (Ph. D. Dissertation, Master Thesis).
- National Taiwan University (Ph. D. Dissertation, Master Thesis).
- National Taiwan Normal University (Master Thesis).
- National Tsing Hua University, Taiwan (Ph. D. Dissertation, Master Thesis).
- University Tunku Abdul Rahman, Malaysia (Master Thesis).
- Tatung University, Taiwan (Master Thesis).

15) Invited Talk:

- “Graphics Hardware Architecture” 3D 多媒體課程教學研討會暨種子教師培訓營, at Institute of EE, National Taiwan University, Jan. 20, 2016.

- “Energy-Efficient FastICA Architecture and Implementation for EEG Signal Processing” at Integrated Circuits and Systems Group, National Central University, Jan. 07, 2015.
- “Efficient Geometry Engine Design and Case Study Implementation” 3D 多媒體課程教學研討會暨種子教師培訓營, at Institute of EE, National Taiwan University, Dec. 06, 2014.
- “Energy-Efficient ICA Architecture and Implementation for Biomedical Signal Processing” at Graduate Institute of Computer Science and Information Engineering, Chang Gung University, Jan. 08, 2014.
- “Power-Area Efficient Geometry Subsystem Design” 3D 多媒體課程教學研討會, at Institute of EE, National Taiwan University, Nov. 30, 2013.
- “Power-Area Efficient Geometry Subsystem Design” 3D 多媒體技術暨課程研討會, at Institute of EE, National Taiwan University, Nov. 18, 2012.
- “Energy-Efficient VLSI Architecture for Eight-Channel FastICA Implementation” at Swartz Center for Computational Neuroscience, UCSD, Aug. 15, 2012.
- “3D Graphics System Design and Implementation” at Institute of Communications Engineering, National Tsing Hua University, Taiwan, Apr., 2010.
- “Low Power Data Format Converter Design Using Static Register Allocation” at Dept. of Electronics Engineering, National Chiao Tung University, Taiwan, Nov., 2007.
- “VLSI Architecture Design Spectrum and Case Study” at Dept. of Computer Science, National Chiao Tung University, Taiwan, Sep., 2006.
- “Recursive DFT/IDFT Design for OFDM-based Communication Systems: Algorithm and Architecture” at Dept. of Computer Science, National Chiao Tung University, Taiwan, Nov., 2005.
- “Modern VLSI Signal Processing Kernels via CIC Design Flow” at National Kaohsiung First University of Science and Technology, Taiwan, Dec., 2004.
- “Efficient VLSI Architectures for Digital Signal Processing Systems” at National Chung Cheng University, Taiwan, June, 2002.

Ph. D. Supervised

1) Di-You Wu (2012/10)

Dissertation Title: Design and Implementation of Energy-Efficient Signal Separation Systems.

Research Project

- 1) CTCI - Intelligent Sensing Technology Research with Applications to the Construction Site Management: Project PI (2017/01 ~ 2017/12).
- 2) NARL-CIC - iOS based APP Research for the MorSensor Ultrasonic Ranger: Project PI (2017/04/10 ~ 2017/07/10).
- 3) MOST - An Integrated Software-Hardware Platform for Ray Tracing based Graphics Applications on Heterogeneous Multi-Core Systems: A Reconfigurable 3D Graphics Processor Design for Hybrid Rendering of Ray-Tracing and Rasterization: Sub-Project PI (2014/08 ~ 2017/07).
- 4) NCTU Project of Research Competency Enhancement for Young Professor: Power-efficient On-line Multi-mode Hilbert-Huang Transform Hardware Design and Implementation for Biomedical Signals: Project PI (2012/04 ~ 2012/12).
- 5) NSC - An Embedded Multi-Core System for Client Side Graphics Applications: A Programmable 3D Graphics Processor Design for Client-Side Multi-Core Embedded Systems: Sub-Project PI (2011/05 ~ 2014/07).
- 6) NSC - Next Generation Intelligent Intensive Care Unit Health-Care Systems: Design Integration of Biomedical Signal Processor and Multiple Biomedical Information Display based on Next-Generation Intelligent ICU: Sub-Project PI (2011/05 ~ 2014/07).
- 7) ASUS - Application Services in Heterogeneous Cloud Platform: Project PI (2010/09 ~ 2011/08).
- 8) NSC - System Development and SoC Design of a Truly Portable Neuroimaging System Based on EEG/EKG/fNIRS Multisensors: Low-Complexity Biomedical Computation Engine Design and Embedded Platform Development: Sub-Project PI (2008/08 ~ 2011/09).

- 9) NSC - Brain Computer Interface and Biofeedback Study with Moving Vehicle Control Demonstration: Smart Sensor SoC design and Embedded Wireless Biomedical Platform Development: Sub-Project PI (2007/08 ~ 2008/07).
- 10) MOST - Core Technologies and Application Developments for M2M Communication Systems: Project Co-PI (2016/10 ~ Present).
- 11) MOST - Memory and Multicore System Architecture of Processing in Memory with Non-Volatility: Project Co-PI (2014/08 ~ 2017/07).
- 12) MOST - Cloud and Big Data Computing Platforms for M2M Communications Systems: Co-PI (2014/01 ~2017/12).
- 13) Delta - Cloud Computing Curriculum Program and Collaborated Research Project. Subproject 6: Noncontact Posture and Biomedical Signal Sensing Research: Project Co-PI (2014/01 ~ 2014/12).
- 14) NCTU-National Taiwan University Hospital Hsin-Chu Branch Collaborated Research Project. Development of free or light contact sensing system measuring locus of motion and application to neuron related disease: Project Co-PI (2015/01 ~ 2016/12).
- 15) NCTU-National Taiwan University Hospital Hsin-Chu Branch Collaborated Research Project. Development of free or light contact sensing system for sensing the locus of motion and applications to neurological patient in future: Co-PI (2013/01 ~ 2014/12).
- 16) MOE - Intelligent Electronics Talent Cultivation Program - Application Processors Education Consortium: Project Co-PI (執行秘書) (2012/12 ~ 2016/4/30).
- 17) MOE - Intelligent Electronics Talent Cultivation Program - 4C Electronics Education Consortium: Project Co-PI (執行秘書) (2012/07 ~ 2013/02).
- 18) MOE - Intelligent Electronics Talent Cultivation Program - 4C Electronics - Intelligent Electronics Cross-Fields Application Course Program - 3D Multimedia Systems: Project Co-PI (2011/09 ~ 2014/01).
- 19) NSC - GreenArmy: Energy-Efficient and Scalable Cloudlet Server on Chip: Medical Research and Development of Temporal-, Frequency- and Spatial-Domain Modality by Using HHT/PRLS Based on Cloudlet Server on Chip: Sub-Project Co-PI (2011/05 ~ 2014/07).
- 20) NSC - Detection of Hardware Trojan: Project Co-PI (2011/01 ~ 2012/12).
- 21) NSC - Advanced Green Energy DOT/EEG/ECG Heart-Brain System on Chip and Embedded systems for Integrated Brain-Heart Health Care Systems Key Technology: Project Co-PI (2010/11 ~ 2011/08).
- 22) NSC - System Development and SoC Design of a Truly Portable Neuroimaging System Based on EEG/EKG/fNIRS Multisensors: Project Co-PI (2008/08 ~ 2011/09).
- 23) NSC - Design of a DVB-MHP Platform with an Extension for 3-D Video Support: Project Co-PI (2007/11 ~ 2010/10).

Honor/Certificate

- 1) 2016 NARL - CIC - Morsensor Innovation and Application Design Contest, 2nd Place. (Co-supervisor with Dr. Yun-Wei Lin; Domestic Contest.) [Chinese: 財團法人國家實驗研究院-國家晶片系統設計中心(CIC) 2016 MorSensor 無線感測積木創意應用設計競賽-銀牌。]
- 2) 2016 MOEA - Industrial Development Bureau: Mobileheroes Communication Contest – MediaTek IoT Development Contest, 5th Place. (Co-supervisor with Dr. Yun-Wei Lin; Domestic Contest.) [Chinese: 經濟部工業局: 2016 通訊大賽-聯發科技物聯網開發競賽: 佳作]
- 3) Acer-NCTU aBeing Application and Implementation Contest, 2nd Place. (As a supervisor; NCTU Contest) [Chinese: 2016 宏碁-交通大學 aBeing 應用實作競賽-第 2 名]
- 4) IEEE Senior Member. (2016~present)
- 5) 2015 NARL - CIC - Morsensor Innovation and Application Design Contest, 4th Place. (As a supervisor; Domestic Contest.) (As a supervisor; Domestic Contest.) [Chinese: 財團法人國家實驗研究院 - 國家晶片系統設計中心(CIC) - 2015 MorSensor 無線感測積木創意應用設計競賽: 佳作]

- 6) 2015 MOEA - Department of Commerce: Wearable Magic Future: Demo Technology Innovation Sharing Campus Workshop Contest, 2nd Place. (Co-supervised with Prof. Y. C. Tseng; Domestic Contest.) [Chinese:經濟部商業司:「穿戴」起不可思議的未來 - 104 年度展示科技創意分享校園工作坊競賽:第二名]
- 7) 2015 NCTU-Contest of Innovative IoT/M2M Service based on Reusable Platforms, 2nd Place. (As a supervisor; The teams from other universities in Taiwan can join this domestic contest.) [Chinese:亞軍]
- 8) 2015 NCTU-Contest of Innovative IoT/M2M Service based on Reusable Platforms, 3rd Place. (As a supervisor; The teams from other universities in Taiwan can join this domestic contest.) [Chinese:季軍]
- 9) 2014 Intel Taiwan Intelligent Systems Design Student Contest, 1st Place. (As a supervisor; Domestic Contest.) [Chinese:冠軍]
- 10) J. W. Qiu, T. H. Chiang, C. C. Lo, L. M. Lin, L. D. Van, Y. C. Tseng, and Y. T. Ching, “Continuous human location and posture tracking by multiple depth sensors,” in *Proc. IEEE International Conference on Internet of Things (iThings 2014)*, Best Paper Award. [Chinese:最佳論文獎]
- 11) 2014 NCTU-Contest of Innovative IoT/M2M Service based on Reusable Platforms, 1st Place. (As a supervisor; The teams from other universities in Taiwan can join this domestic contest.) [Chinese:冠軍]
- 12) 2014 NCTU-Contest of Innovative IoT/M2M Service based on Reusable Platforms, 3rd Place. (As a supervisor; The teams from other universities in Taiwan can join this domestic contest.) [Chinese:季軍 x2]
- 13) 2014 NCTU-Contest of Innovative IoT/M2M Service based on Reusable Platforms, 4th Place. (As a supervisor; The teams from other universities in Taiwan can join this domestic contest.) [Chinese:佳作]
- 14) 2014 College of Computer Science, National Chiao Tung University: Teaching Award.
- 15) 2013 MOE - Intelligent Electronics Talent Cultivation Program - 4C Electronics Contest Field, 1st Place. (Co-supervised with Prof. Y. S. Wang; Domestic Contest.) [Chinese:特優]
- 16) 2012 National IC Design Contest - Standard Cell Digital Design Group for Graduate, 4th Place. (As a supervisor) [Chinese:設計完成獎]
- 17) 2011 National Chiao Tung University Outstanding Researchers Award.
- 18) 2010 National IC Design Contest - Standard Cell Digital Design Group for Graduate, 3rd Place. (As a supervisor) [Chinese:佳作]
- 19) 2010 National IC Design Contest - Full-Custom Design Group for Graduate, 4rd Place. (As a supervisor) [Chinese:設計完成獎]
- 20) 2010 National Embedded System Design Contest - Hardware/Software Integration Group, 3rd Place. (Co-supervised with Prof. C. J. Tsai) [Chinese:佳作]
- 21) 2007 ARM Code-O-Rama Design Contest, 3rd Place. (As a supervisor; Domestic Contest) [Chinese:季軍]
- 22) 2006 National Embedded Software Design Contest - Application Group, 3rd Place. (Co-supervised with Prof. C. T. Lin) [Chinese:佳作]
- 23) C. A. Tsai, Y. T. Chou, Y. T. Chang, L. D. Van, and C. M. Huang, “ARM-based SoC prototyping platform using Aptix,” in *Proc. iNEER Conference for Engineering Education and Research (iCEER)*, Mar. 2005, Tainan, Taiwan, Best Poster Award.
- 24) 2004 National Chip Implementation Center (CIC) Outstanding Award. (Rate= 3.8%)
- 25) 2001 IEEE Award for outstanding leadership and service to the National Taiwan University Student Branch.
- 26) Motorola Scholarship. (Jan. 1997; Domestic Scholarship.)
- 27) Chunghwa Picture Tube Scholarship. (Oct. 1995; Domestic Scholarship.)
- 28) First Honor of Dept. of Electrical Engineering, Tatung Institute of Technology with 183 credits. (1995)

Publication

Journal Papers

- [1] Lan-Da Van, P. Y. Hung, and T. C. Lu “Cost-effective and variable-channel FastICA hardware architecture and implementation for EEG signal processing,” *Journal of Signal Processing Systems*, vol. 82, pp. 91-113, issue 1, Jan, 2016. (SCI, Full Paper)
- [2] I. H. Khoo, H. C. Reddy, Lan-Da Van, and C. T. Lin, “General formulation of shift and delta operator based 2-D VLSI filter structures without global broadcast and incorporation of the symmetry,” *Multidimensional Systems and Signal Processing*, 25, pp. 795-828, 2014. (SCI, Full Paper)
- [3] Lan-Da Van, D. Y. Wu, and C. S. Chen, “Energy-efficient FastICA implementation for biomedical signal separation,” *IEEE Trans. Neural Networks*, vol. 22, no. 11, pp. 1809-1822, Nov. 2011. (SCI, Full Paper)
- [4] Lan-Da Van, and T. Y. Sheu, “A power-area efficient geometry engine with low-complexity subdivision algorithm for 3D graphics system,” *IEEE Trans. Circuits Syst. I: Regular Papers*, vol. 58, no. 9, pp. 2211-2224, Sep. 2011. (SCI, Full Paper)
- [5] D. Y. Wu, and Lan-Da Van, “Efficient detection algorithms for MIMO communication systems,” *Journal of Signal Processing Systems*, vol. 62, issue 3, pp. 427-442, Mar. 2011. (SCI, Full Paper)
- [6] P. Y. Chen, Lan-Da Van, I. H. Khoo, H. C. Reddy, and C. T. Lin, “Power-efficient and cost-effective 2-D symmetry filter architectures,” *IEEE Trans. Circuits Syst. I: Regular Papers*, vol. 58, no. 1, pp. 112-125, Jan. 2011. (SCI, Full Paper)
- [7] J. H. Tu, and Lan-Da Van, “Power-efficient pipelined reconfigurable fixed-width Baugh-Wooley multipliers,” *IEEE Trans. Computers*, vol. 58, no. 10, pp. 1346-1355, Oct. 2009. (SCI, Full Paper)
- [8] C. T. Lin, Y. C. Yu, and Lan-Da Van, “Cost-effective triple-mode reconfigurable pipeline FFT/IFFT/2-D DCT processor,” *IEEE Trans. VLSI Sys.*, vol. 16, no. 8, pp. 1058-1071, Aug. 2008. (SCI, Full Paper)
- [9] Lan-Da Van, C. T. Lin, and Y. C. Yu, “VLSI architecture for the low-computation cycle and power-efficient recursive DFT/IDFT design,” *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. E90-A, no. 8, pp. 1644-1652, Aug. 2007. (SCI, Full Paper)
- [10] M. A. Song, Lan-Da Van, and S. Y. Kuo, “Adaptive low-error fixed-width Booth multipliers,” *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, vol. E90-A, no. 6, pp. 1180-1187, Jun. 2007. (SCI, Full Paper)
- [11] Lan-Da Van, and C. C. Yang, “Generalized low-error area-efficient fixed-width multipliers,” *IEEE Trans. Circuits Syst. I: Regular Papers*, vol. 52, no.8, pp. 1608-1619, Aug. 2005. (SCI, Full Paper)
- [12] Lan-Da Van, “A new 2-D systolic digital filter architecture without global broadcast,” *IEEE Trans. VLSI Sys.*, vol. 10, no. 4, pp. 477-486, Aug. 2002. (SCI, Full Paper)
- [13] Lan-Da Van, and W. S. Feng, “An efficient systolic architecture for the DLMS adaptive filter and its applications,” *IEEE Trans. Circuits Syst. II*, vol. 48, no. 4, pp. 359-366, Apr. 2001. (SCI, Full Paper)
- [14] Lan-Da Van, S. S. Wang, and W. S. Feng, “Design of the lower-error fixed-width multiplier and its application,” *IEEE Trans. Circuits Syst. II*, vol. 47, no. 10, pp. 1112-1118, Oct. 2000. (SCI, Brief)

Book Edited

- [1] Intel® Atom™ Platform: Intelligent Systems Development and Applications, Editor: Lan-Da Van, Library & Book, 2014. (in Traditional Chinese, Sponsored by Intel, ISBN 978-986-90988-3-0)

International Conference Papers

- [1] P. Y. Chen, L. D. Van, H. C. Reddy, and I. H. Khoo, "New 2-D filter architectures with Quadrantal symmetry and Octagonal symmetry and their error analysis," in *Proc. IEEE International Midwest Symposium on Circuits and Systems (MWSCAS)*, accepted, Aug. 2017, Boston, USA.
- [2] X. Zhang, C. W. Wu, P. Fournier-Viger, L. D. Van, Y. C. Tseng, "Analyzing students' attention in class using wearable device," in *Proc. IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)*, accepted, Jun. 2017, Macau, China.
- [3] T. H. Wu, C. H. Chang, Y. W. Lin, L. D. Van, Y. B. Lin, "Intelligent plant care hydroponic box using IoTtalk," in *Proc. IEEE International Conference on Internet of Things (iThings)*, Dec., 2016, pp. 398-401, Chengdu, China.
- [4] T. C. Lu, P. Y. Chen, S. W. Yeh, and L. D. Van, "Multiple stopping criteria and high-precision EMD architecture implementation for Hilbert-Huang transform," in *Proc. IEEE Biomedical Circuits Syst. (BioCAS)*, Oct. 2014, pp. 200-203, Lausanne, Switzerland.
- [5] J. W. Qiu, T. H. Chiang, C. C. Lo, L. M. Lin, L. D. Van, Y. C. Tseng, and Y. T. Ching, "Continuous human location and posture tracking by multiple depth sensors," in *Proc. IEEE International Conference on Internet of Things (iThings)*, Sep., 2014, pp. 155-160, Taipei, Taiwan. [[Best Paper Award](#)]
- [6] T. C. Lu, S. H. Hsu, S. J. Tzeng, C. M. Chang, and L. D. Van, "Implementation of a human-centric GUI for next-generation intensive care unit," in *Proc. IEEE International Conference on Consumer Electronics - Taiwan*, May, 2014, pp. 179-180, Taipei, Taiwan.
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