

CURRICULUM VITAE

Dr TSENG, King Jet

Qualifications

1988 – B.Eng (First Class Honours), National University of Singapore

1990 – M.Eng, National University of Singapore

1993 – Ph.D, Cambridge University, United Kingdom

Professional Qualifications/Memberships

Cambridge Philosophical Society: **Fellow**-1991

Cambridge Commonwealth Society: **Fellow**-1991

Institute of Electrical and Electronics Engineering (IEEE): **Member**-1988; **Senior Member**-1998

Institution of Engineering and Technology (IET): **Member**-1999

Institute of Engineers, Singapore (IES): **Member**-1997; **Senior Member**-2005

Engineering Council, United Kingdom: **Chartered Engineer**-1999

Major Appointments

1989 – 1990: Lecturer, Ngee Ann Polytechnic (NP), Singapore

1993 – 1998: Lecturer, Nanyang Technological University (NTU), Singapore

1999 – 1999: Assistant Professor, Nanyang Technological University (NTU), Singapore

2000 –: Tenured Associate Professor, Nanyang Technological University (NTU), Singapore

2001 – 2008: Adjunct Lecturer, UniSim (formerly, SIM Open University), Singapore

1994 – 2008: Supervisor of NTU Laboratories for Power Electronics, Drives, Energy, Machines and Power Engineering

2007 –: Director for Centre for Smart Energy Systems (CSES), Nanyang Technological University

2008 –: Head of Power Engineering Division, Nanyang Technological University

1999: Visiting Professor, Ecole Supérieure d'Ingénieur en Electrotechnique et Electronique, (ESIEE) Amiens, France and Yangon Technological University, Myanmar.

1999 – 2002: Advisor to Productivity and Standards Board, Singapore on Safety and Energy Efficiency of IT Equipment

1999 – 2002: Advisor to Ministry of Environment, Singapore on Energy Efficiency.

2005: Advisor to Agency for Science, Technology and Research (ASTAR), Singapore on Science and Technology Plan 2010

2005: Chairman, Institute of Electrical and Electronics Engineering (IEEE) Singapore Section

2006: Advisor to Economic Development Board (EDB) of Singapore on Alternative Energy Technology

2009 - 2011: Member, Building and Construction Authority Academy Advisory Panel.

2010 - 2012: Member, Energy Research Development Fund Advisory Committee, Energy Market Authority.

Major Awards, Recognition and Achievements

Cambridge Commonwealth Trust Scholarship co-sponsored by Shell International (1990-1993)

United Kingdom **Overseas Research Scholarship** tenable at Cambridge University (1990-1993)

Awarded the **Swan Premium** by The Institution of Electrical Engineers (UK) on 30 Sep 1996 for the best paper published in the journal IEE Proceedings on Electric Power Applications.

Awarded the **Tan Chin Tuan Fellowship** in 1999 by NTU for attachment to ESIEE-Amiens/Paris, France.

Awarded the **IEEE Millennium Medal** in 2000 for outstanding achievements and contributions in the area of electrical and electronics engineering.

Awarded the **IEEE Region Ten Outstanding Volunteer Award** in 2007 for outstanding leadership and management of IEEE Singapore Section, its Chapters and Conferences.

Listed in Marquis **Who's Who in the World** for contributions to engineering education and research.

Listed in Marquis **Who's Who in Science and Engineering** for contributions to engineering education and research.

Listed in Marquis **Who's Who in Finance and Industry** for contributions to engineering education and research.

Listed in **International Biographical Centre** for contributions to engineering education and research.

Granted a **patent** on power rectifier characterization systems in 2004 and assigned it to Poworld Pte Ltd.

Wheel motor project showcased in NTU Innovation Centre between 1999 and 2002 as example of outstanding innovation.

Centrifugal blood pump project in EEE Exhibition 2001, interview featured on Mediacorp Channel 8.

Flywheel energy storage project in COE Exhibition 2004 awarded Bronze prize in research category.

Awarded **research manpower grant** under NTU's Research Outcome and Award Recognition (ROAR) scheme.

Awarded **Long Service Award** by Nanyang Technological University, 2001, 2006.

Awarded **Long Service Award** by SIM University, 2006.

Supervised over 20 PhD students and research staff.

Published over 100 journal and conference papers.

Managed research projects totaled over US\$1 million in funding.

A Selection of Courses Developed and Taught by Dr K.J. Tseng

Diploma course on Fundamentals of Control Engineering (1989-1990), *NP*

Undergraduate course on Power Systems and Machines (1994-2003), *NTU*

Laboratory course on Harmonic Filter Design (1994-2000), *NTU*

Design course on Computer Aided Design of Electromagnetic and Electromechanical Systems (1997-2000), *NTU*

Postgraduate course on Advanced Electrical Drives (2000-2001), *NTU*

Laboratory course on Quality of Power Supply (2000-2002), *NTU*

Industrial course on Power Electronics and Drive Systems for Maritime Port (2000), *PSA*

Undergraduate course on Mechatronics – Designing Intelligent Machines (2001-2002), *UniSim*

Laboratory course on Operation of Power Generation and Conversion System (2003-2005), *NTU*

Undergraduate course on Power Electronics and Drives (2003-2006), *NTU*

Postgraduate course on Power Semiconductor and Passive Devices (2004-2009), *NTU*

Industrial course on Power Device Selection for Switch Mode Power Supplies (2006), *Dreamcatcher*

Postgraduate course on Renewable Electrical Energy Systems (2006-2009), *NTU*

Undergraduate course on Aircraft Electrical Devices and Systems (2007-2008), *NTU*

Undergraduate course on Design of Wind Energy Systems (2008-2009), *NTU*

Undergraduate course on Avionics System Design (2009-2010), *UniSim*

Undergraduate course on Science and Technology in Ancient China (2011), *NTU*

A Selection of Services Rendered to Industry, Academia and Public Sector

Examiner for SIM University (formerly Singapore Institute of Management Open University Centre) for its final year course TZS402 Technology Project (2003-2006).

External Assessor for Singapore Polytechnic for Advanced Diploma in Power Electronics and Industrial Applications (2006).

External Assessor for SIM University for undergraduate course Control Systems Design (2006).

External examiner for University of New South Wales PhD thesis in power electronics and drives (2002).

External examiner for National University of Singapore postgraduate thesis in hard disk drives (2004).

External examiner for University of Canterbury PhD thesis in power electronics (2006).

External examiner for Annalalai University PhD thesis in power electronics (2007).

External reviewer for Hong Kong Council of Research Grants, 2007-2008.

Consultant to Advanced Material Engineering on magnetics (1996)

Consultant to Fisher-Rosemount on magnetics (1998-1999)

Consultant to PSA Corporation on maritime port drive systems (2000)

Consultant to Dreamcatcher Pte Ltd on technical courses (2006)

Consultant to Defense Science and Technology Agency (DSTA) on energy storage systems (2004-2005)

Consultant to Defense Science Organization (DSO) on pulse power (2005-2006)

Mentor, National Science Scholarship Program, ASTAR (2002-2006)

Advisor to Spring Singapore on technical standards (1999-2003)

Advisor to ASTAR on technology roadmap (2004-2005)

Advisor to Ministry of Environment on energy efficiency (1999-2003)

Consultant to EDB on SINERGY Center on alternative energy research (2006)

Consultant to Vestas Technology R&D Pte Ltd (2007-2008)

A Selection of Services Rendered to Professional Societies

Treasurer, IEEE Industry Applications Chapter of Singapore (1996-1997, 2000)
Vice-Chair, IEEE Industry Applications Chapter of Singapore (1998-2000)
Chair, IEEE Industry Applications Chapter of Singapore (1997-1999)
Vice-Chair, IEEE Industry Applications / Power Electronics Joint Chapter of Singapore (2007)
Branch Counselor, IEEE NTU Student Branch (2000-2001)
Honorary Auditor, IEEE Singapore Section (1999-2001)
Treasurer, IEEE Singapore Section (2002-2003)
Vice-Chair, IEEE Singapore Section (2004)
Chair, IEEE Singapore Section (2005)
Immediate Past Chair, IEEE Singapore Section (2006)
Awards and Recognition Chair, IEEE Singapore Section (2006)
Honorary Auditor, IES (2006-2007)
Member, IES/IEEE Medal of Excellence Award Committee (2003-2006)
Chair, Power Electronics and Drive Systems (PEDS) Conference Management Committee of IEEE Singapore Section (2000-2004)
Member, Technical Program Committee of International Power Electronics and Motion Control Conference (IPEMC-Beijing), 2000.
General Co-Chair, Power Electronics and Drive Systems Conference (PEDS-Bali), (2001)
Technical Program Chair, Power Electronics and Drive Systems Conference (PEDS-Singapore), (2003)
Member, Technical Program Committee, Int. Power Electronics Conference (IPEC-Niigata), (2005)
Member, International Program Committee, IASTED Int. Conf on Power and Energy Systems, (IASTED-PES-Spain), (2005).
Finance Chair, IEEE Conference on Emerging Technologies - Nanoelectronics (CET-Singapore), (2006)
Member, Technical Program Committee, IEEE Applied Power Electronics Conference (APEC-Dallas), (2006)
Special Session Chair, IEEE Conference on Industrial Informatics (INDIN-Singapore), (2006)
Advisor, IEEE Conference on Industrial Electronics and Applications (ICIEA-Singapore), (2006)
Technical Program Co-Chair, Power Electronics and Drive Systems Conference (PEDS-Bangkok), (2007)
Member, Technical Program Committee, IEEE Applied Power Electronics Conference (APEC-Anaheim), (2007)
Finance Chair, IEEE Conference on Industrial Electronics and Applications (ICIEA-Harbin), (2007)
Member, Technical Program Committee, Power Conversion Conference (PCC-Nagoya), (2007)
Technical Program Chair, IEEE Conference on Sustainable Energy Technologies (ICSET-Singapore) (2008)
Member, Editorial Advisory Panel, Electric Power Systems Research journal (2007-2011)
Organizing Chair, IEEE Region Ten Conference (TENCON), (2009)

Served as Reviewer for the following journals since 2000:

- IEEE Transactions on Power Electronics
- IEEE Transactions on Industrial Electronics
- IEEE Transactions on Industry Applications
- IEEE Transactions on Energy Conversion
- IEEE Transactions on Magnetics
- IEEE Transactions on Circuits and Systems
- IEEE Transactions on Industrial Informatics
- IEEE/ASME Transactions on Mechatronics
- Electric Power Systems Research
- Journal of Solid State Electronics

Served as conference session chairman in PEDS'95, PEDS'97, PEDS'01, PEDS'03, IPEC'95, IPEC'97, IPEC'99, IPEC701, IPEC'03, IPEMC'00, IPEMC'04, IECON'04, ICARCV'00, IPEC'05, ICIEA'06.

Served as reviewer for above conferences and other such as:
ISNN2007; ISIE07, etc

Selected Research Projects Supervised and Managed by Dr K.J. Tseng

1. Modelling and characterization of power semiconductor and electromechanical devices for the design of power electronics and drive systems, funded by Ministry of Education, 1994-1997.
2. Permanent magnet brushless DC wheel motor for electric vehicles, funded by ST Automotive, (Chen Guhong), 1994-1996.
3. Modelling of power diode for computer-aided analysis of power electronic circuits, funded by NTU, (Pan Suzhen), 1995-1997.
4. Analysis of flux distribution and core losses in interior permanent magnet motor, funded by NTU, (Wee Siang Beng), 1996-1998.
5. DSP-based torque control strategy for direct-driven five-phase PM BLDC motor for electric vehicles, funded by NTU, (Luo FL, Teng Lin Fong), 1997-1998.
6. Characterization of ferrite cores at high frequency – measurement and theoretical analysis, funded by NTU, (Foo CF, Zhang Daming), 1997-1999.
7. Model of electric arc for design of electronic arc furnace, funded by Tetra Laval (Wang Yaoming), 1997-1998.
8. Modelling and control of switched reluctance motor, funded by NTU, (Cao Shuyu), 1997-2000.
9. Development of advanced motion control systems, funded by Ministry of Education, (Luo FL), 1998-2001.
10. Dielectric and loss properties of MnZn ferrites at high frequency, funded by NTU, (Zhu Jun), 1998-2001.
11. Transcutaneous energy transmission system for implantable medical devices, funded by NTU, (Foo CF and Zhao Lingyin), 1998-1999.
12. Modelling of fluorescent lamp for design of electronic ballast, funded by Hildamda Pte Ltd, (Liu Tianmu), 1998-1999.
13. Analysis of power converter topologies for variable reluctance motor drives, funded by NTU, (Wang Jijiu), 1998-1999.
14. Development of 3-axis motion actuator for hardware-in-loop simulation of satellite motion, funded by Ministry of Education, (Ling KV, Mahinda, Xie Yue), 1998-2004.
15. Characterization techniques for power semiconductor and magnetic devices, funded by Ministry of Education, (Foo CF), 1999-2002.
16. Piezoelectric transformer for high frequency switching power supply, funded by NTU, (Foo CF, Jin Ying), 1999-2000.
17. Issues in modeling and simulation of interior permanent magnet motor, funded by NTU, (Lim Shaw Peng), 1999-2000.
18. Development of permanent magnet bearingless motors, funded by NTU, (Shen Jianxin), 1999-2000.
19. Development of power electronics and control systems, funded by Ministry of Education, 2000-2003.
20. Modeling of power semiconductor devices, funded by NTU, (Tan CM, Gong Xiaowu), 2000.
21. Development of bearingless motor drives technology, funded by Ministry of Education, (Rahman, Mahinda), 2000-2004.
22. Design of bearingless centrifugal blood pump, funded by NTU, (Chan WK, Wan Song), 2001-2002

23. Modeling of bearingless motor drives, funded by NTU, (Zhou Jie), 2001-2003.
24. Development of electrical power supply system for micro-satellite with maximum power point tracking, funded by NTU-CREST and DSO, (Arichandran K. and Tan BL), 2002-2004
25. Development of partially-self-bearing machine for flywheel energy storage system, funded by NTU, (Zhang Chi), 2002-2006.
26. Investigations into New Concept of Inductively-Driven Centrifugal Blood Pumps, funded by NTU, (Wu Peng), 2002-2006.
27. Study of control algorithms for matrix converters, funded by NTU, (Wu Bin, Jia Shuyun), 2002-2006.
28. Development of high power multi-output piezoelectric transformers, funded by Ministry of Education, (Hu Junhui, Du Jinlong), 2002-2005.
29. State space analysis and quick control methods for the series parallel resonant converter, funded by NTU, (Kenneth Sng, Chen Hao), 2003-2006.
30. Study on batteries and battery energy storage systems, funded by DSTA, (Kenneth Sng) 2004.
31. High-power pulse power supply for laser application, funded by DSO, (Mahinda, Sumedha) 2004-2006.
32. Space vector based hysteresis current control strategies for matrix converter, funded by NTU, (Wang Xiao), 2005-2006.
33. Development of underwater power generation systems, funded by industrial partner, (Mahinda, Wang Xiaoyu), 2008-2010.
34. Development of prognosis model for power electronics module, funded by Rolls-Royce, (Nguyen Hoan Thong, Rusli), 2009-2010.
35. Development and demonstration of silicon-carbide power converters for hybrid electric vehicles, funded by NRF, (Ng Swee Peng, Rusli), 2009-2010.
36. Electric power systems for wind energy, funded by NTU, (Zhang Shao), 2007-2011.
37. Flywheel energy storage systems, funded by NTU, (Nguyen Trong Duy), 2007-2011.
38. Development of battery model and lifetime prediction, funded by Vestas, (Choi SS, Wang Xiaoliang), 2009-2010.
39. Marine energy systems, funded by NTU and Rolls-Royce, (Seyed Mahda Jahromi, Ali Maswood), 2008-2012.
40. Wide-band gap power semiconductors, funded by NTU, (Arie Nawawi, Rusli), 2009-2013

Research Students/Staff Supervised by Dr K.J. Tseng

1. Dr Cao Shuyu
2. Dr Zhu Jun
3. Mr Chen Guhong
4. Ms Pan Suzhen
5. Mr Wee Siang Beng
6. Mr Liu Tianmu
7. Mr Wang Jijiu
8. Mr Zhao Lingying
9. Ms Lim Shaw Peng
10. Mr Wan Song
11. Mr Tan Boon Liong
12. Mr Wang Xiao
13. Dr Wang Yaoming
14. Dr Shen Jianxin
15. Dr Gong Xiaowu
16. Dr Zhou Jie
17. Dr Wu Peng
18. Dr Zhang Chi
19. Dr Jia Shuyun
20. Ms Chia Chew Lin
21. Mr Zhang Shao
22. Mr Nguyen Trong Duy
23. Ms Yao Dailin
24. Mr Seyed Madha Jaromi
25. Mr Arie Nawawi
26. Mr Nguyen Hoan Thong
27. Mr Ng Swee Peng

List of Selected Publications

- Low T.S., Tseng K.J., Lee T.H., Lim K.W., and Lock K.S., "Strategy for the Instantaneous Torque Control of Permanent-Magnet Brushless DC Drives," IEE Proceedings Part B, Vol 137, No 6, Nov 1990, pp. 355-363.
- Low T.S., Lee T.H., Lock K.S. and Tseng K.J., "DSP-Based Instantaneous Torque Control in Permanent-magnet Brushless D.C. Drives," Mechatronics (UK), Vol. 1, No. 2, 1991, pp. 203- 229.
- Low T.S., Lee T.H., Tseng K.J. and Lock K.S., "Servo Performance of a BLDC Drive with Torque Control," IEEE Trans on Industry Applications, Vol 28, Apr 1992, pp.455-462.
- Lee T.H., Low T.S., Tseng K.J., and Lim H.K., "An Intelligent Indirect Dynamic Torque Sensor for Permanent-Magnet Brushless DC Drives," IEEE Trans on Industrial Electronics, Vol.4 1, Apr 94, pp. 191-200.
- Tseng K.J., and Palmer P.R., "Mathematical model of the gate turnoff thyristor for use in circuit simulations," IEE Proceedings Pt. B, Vol. 141, No 6, Nov 1994, pp.284-292.
- Tseng K.J., "DSP-based control of brushless DC drives for direct-driven robotic arms," Microprocessors and Microsystems, Vol. 19, No. 10, Dec 1995, pp.581-589.
- Tseng K.J. and Pan S., "Modified charge control equation for simulation of diode reverse recovery," IEE Electronics Letters, Vol.32, No.4, Feb 1996, pp.404-406.
- Tseng K.J. and Wang Y., "A dynamic electric arc model for electronic circuit simulation," IEE Electronics Letters, Vol.32, No.8, Apr 1996, pp.705-707.
- Tseng K.J. and Chen G., "Computer aided design and analysis of direct driven wheel motor drive," IEEE Trans on Power Electronics, Vol. 12, No.3, May 1997, pp.517-527.
- Tseng K.J., Wang Y. and Vilathgamuwa D.M., "An experimentally verified hybrid Cassie- Mayr electric arc model for power electronic circuit simulation," IEEE Trans on Power Electronics, Vol. 12, No.3, May 1997, pp.429-436.
- Tseng K.J., "Modelling of diode forward recovery characteristics using modified charge- control equation," Int. Journal of Electronics, Vol.84, No.5, 1998, pp.437-444. (1st author)
- Vitathgamuwa D.M., Deng J.H., and Tseng K.J., "EMI suppression with switching frequency modulated dc-dc converters," IEEE Industry Applications Society Magazine, Vol.5, No.6, 1999, pp.27-33.
- Tan C.M. and Tseng K.J., "Using power diode models for circuit simulations – a comprehensive review," IEEE Trans on Industrial Electronics, Vol. 46, No.3, Jun 99, pp.637-645.
- Foo C.F., Tseng K.J. and Zhao L., "A new structure transcutaneous transformer for totally implantable artificial heart system, IEE Electronic Letters, Vol.35, No.2, Jan 1999, pp.107-108.
- Zhao L., Foo C.F., and Tseng K.J., "A new structure transcutaneous transformer for artificial heart," IEEE Trans on Magnetics, Vol.35, No.5, Sep 1999, pp.3550-3552.
- Tseng K.J. and Wee S.B., "Analysis of flux distribution and core losses in interior permanent magnet motor," IEEE Trans on Energy Conversion, Vol.14, No.4, Dec 1999, pp.969-975.
- Shen J.X., Tseng K.J., Vilathgamuwa D.M. and Chan W.K., "A novel compact PMSM with magnetic bearing for artificial heart application," IEEE Trans on Industry Applications, Vol. 36, No.4, Jul/Aug 2000, pp. 1061-1068.
- Cao S. and Tseng K.J., "Dynamic modelling of SRM including neighbouring phase coupling effects," Electric Machines and Power Systems, Vol.28, No.12, Dec 2000, pp.1141-1164.
- Tseng K.J., Cao S. and Wang J., "A new hybrid C-dump and buck-fronted converter for switched reluctance motors," IEEE Trans on Industrial Electronics, Vol.47, No.6, Dec 2000, pp.1228-1236.
- Zhu J., Tseng K.J. and Foo C.F., "Effects of multi-segment structure in core loss reduction of MnZn ferrite at high frequencies," IEEE Trans on Magnetics, Vol.36, No.5, Sep 2000, pp.3408-3410.
- Shen J.X. and Tseng K.J., "Analyses and compensation of rotor position detection error in a sensorless brushless dc motor", IEEE Trans on Energy Conversion, Vol.18, No.1, Mar 2003, pp.87-93.

- Zhou J. and Tseng K.J., “Performance analysis of single-phase line-start permanent-magnet synchronous motor”, IEEE Trans on Energy Conversion, Vol.17, No.4, Dec 2002, pp.453-462.
- Rahman M.A., Vilathgamuwa M., Tseng K. J. and Uddin N., “Nonlinear control of interior permanent magnet synchronous motor”, IEEE Transactions on Industry Applications, Vol.39, No.2, Mar 2003, pp.408-416.
- Xie Yue; Vilathgamuwa, M.; Tseng, K.J., “Observer Based Robust Adaptive Control of PMSM with Initial Rotor Position Uncertainty”, IEEE Transactions on Industry Applications, Vol.39, No.3, May 2003, pp.645-656.
- Zhu J. and Tseng K.J., “Reducing dielectric losses in MnZn ferrites”, IEEE Transactions on Magnetics. Vol.40, No.5, Sept.2004, pp.3339 – 3345.
- Du J., Hu J. and Tseng K.J., “High-power, multi-output piezoelectric transformers operating at the thickness shear vibration mode,” IEEE Trans on Ultrasonics, ferroelectrics and frequency control, Vol.51, No.5, May 2004 pp.502-509.
- Tseng K.J., Du J. and Hu J., ”Piezoelectric transformer with high power density and multiple outputs“, IEE Electronics Letters, Vol.40, No.12, Jun 2004, pp. 786-788.
- Du J., Hu J. and Tseng K.J., “A plate-shaped high power-density piezoelectric transformer with dual output“, Ceramics International, Vol.30, No.7, 2004, pp.1797-1801.
- Xie Yue, Vilathgamuwa, M., and Tseng, K.J., “An Observer Based Robust Adaptive Controller of Permanent Magnet Synchronous Motor Drive with Initial Rotor Angle Uncertainty”, IEEE Transactions on Energy Conversion, Vol.20, No.1, Mar 2005, pp.115-120.
- Xie Yue; Vilathgamuwa, M.; Tseng, K.J., “Robust Adaptive Control of A 3-axis Motion Simulator with State Observers”, IEEE/ASME Trans on Mechatronics, Vol.10, No.4, Aug 2005, pp.437-448.
- Xiao Y., Zhu K.Y., Zhang C., Tseng K.J. and Ling K.V., “Stabilizing synchronization control of rotor-magnetic bearing systems”, Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, Vol. 219, 2005, pp. 499-510.
- Du J., Hu J., Tseng K.J., Kai C.S., and Siong G.C., “Modeling and Analysis of Dual-Output Piezoelectric Transformer Operating at the Thickness Shear Vibration Mode”, IEEE Trans on Ultrasonics, Ferroelectrics and Frequency Control, Vol. 53, No. 3, Mar 2006, pp.579-585.
- Chen H., Sng E.K.K. and Tseng K.J., “Optimum Trajectory Switching Control for Series Parallel Resonant Converter, IEEE Trans on Industrial Electronics, Vol. 53, No.5, Oct 2006, pp.1555-1563.
- Chen H., Sng E.K.K. and Tseng K.J, “Generalized Optimal Trajectory Control for Closed Loop Control for Series Parallel Resonant Converter, IEEE Trans on Power Electronics, Vol. 21, No.5, Sep 2006, pp.1347-1555.
- Wu P. and Tseng K.J., “Feasibility study on inductively-driven shaft-less centrifugal pump for biomedical applications”, IEEE/ASME Trans on Mechatronics, Vol.11, No.5, Oct 2006, pp.541-550.
- Huang R., Zhang D. and Tseng K.J., “An efficient finite-difference-based Newton-Raphson method to determine intrinsic complex permeabilities and permittivities for Mn-Zn ferrite”, IEEE Trans on Magnetics, Vol.42, No.6, Jun 2006, pp.1655-1660.
- Zhang C. and Tseng K.J., “A Novel Flywheel Energy Storage System with Partially-Self-Bearing Flywheel-Rotor”, IEEE Trans on Energy Conversion. Volume 22, Issue 2, June 2007 Page(s):477 – 487.
- Du J., Hu J. and Tseng K.J, “Vibration Distribution in Output Section of a Piezoelectric Transformer Operating at Thickness Shear Mode”, IEEE Trans on Ultrasonics, Ferroelectrics and Frequency Control, Vol.54, No.10, pp.1984-1991, 2007.
- Huang R., Zhang D. and Tseng K.J, “Determination of Dimension-independent Magnetic and Dielectric Properties for Mn-Zn Ferrite Cores and its EMI Applications”, IEEE Trans on EMC, Vol. 50, pp.597-602, 2008.
- Yao D., Choi S.S., Tseng K.J. and Lie T.T., “A Statistical Approach to the Design of a Dispatchable Wind Power – Battery Energy Storage System”, IEEE Trans on Energy Conversion, Vol.24, No. 4, pp.916-925, Dec 2009.

- Zhang S., Tseng K.J. and Choi S.S., "Statistical Voltage Quality Assessment Method for Grids with Wind Power Generation", accepted for IET Proceedings on Renewable Power Generation.
- Zhang S., Tseng K.J., Nguyen T.D., Wang X. and Vilathgamuwa D.M., "Design of a Robust Grid Interface System for PMSG-based Wind Turbine Generators", accepted for IEEE Transactions on Industrial Electronics.
- Tseng K.J., Low T.S., and Lock K.S., "Torque Control in Permanent-Magnet Brushless DC Drives," Symposium on Motion Control, Singapore, Apr 6, 1989, pp. 12-30.
- Low T.S., Tseng K.J., Lock K.S., and Lim K.W., "Instantaneous Torque Control," 4th International Conference on Electrical Machines and Drives, London, Sep 13-15, 1989, pp. 100-105.
- Tseng K.J., Low T.S., Lee T.H., and Lock K.S., "DSP32-based Instantaneous Torque Control in Permanent-Magnet Brushless DC Drives," International Conference on Automation, Robotics and Computer Vision, Singapore, Sep 18-21, 1990, pp. 591-595.
- Low T.S., Tseng K.J., Lee T.H., and Lock K.S., "Servo Performance of a BLDC Drive with Instantaneous Torque Control," Proc. of Conference on Industry Applications, Seattle, USA, Oct 7-12, 1990, pp. 454-459.
- Tseng K.J., and Palmer P.R., "The Modeling of GTO Thyristors Using SPICE," International Conference on Circuits and Systems, Shenzhen, China, Jun 16-17, 1991, pp. 188-191.
- Low T.S., Lee T.H. and Tseng K.J., "An Intelligent Indirect Dynamic Torque Sensor for Permanent-Magnet Brushless DC Drives," Proc. of IEEE Control Society's American Control Conference (ACC), Jun 1992, pp. 173 6-173 7.
- Tseng K.J., "Simulation of a Complete Power Electronic Drive System," Second International Conference on Automation, Robotics and Computer Vision, Singapore, Sep 15-18, 1992, pp. C04. 1. I -C04.1.6.
- Palmer P.R. and Tseng K.J., "An Accurate GTO Model for Circuit Simulations," 8th European Power Electronics Conference, Brighton, UK, Sep 13-16, 1993, Vol 2, pp.244-248.
- Tseng K.J., Foo C.F. and P.R. Palmer, "Implementing power diode models in SPICE and Saber," IEEE Power Electronics Specialists Conference '94, Taipei, Jun 20-25, 1994, Vol. 1, pp.59-63.
- Tseng K.J. and P.R. Palmer, "Modeling of power semiconductor devices for use in circuit simulations," IEEE Power Electronics Specialists Conference '94, Taipei, Jun 20-25, 1994, Vol. 1, pp.3 8-43.
- Tseng K.J. "Saber templates for the design of inverters and motion controller," International Power Electronics and Motion Control Conference, Beijing, Jun 27-30, 1994, pp.732-736.
- Tseng K.J. and Palmer P.R., "Characterization of reverse recovery behaviour," International Power Engineering Conf '95, Singapore, Feb 27- Mar 1, 1995, pp.453-458.
- Tseng K.J., Yang J., Foo C.F., Vilathgamuwa M. and Palmer P.R., "Performance of power diode model for circuit simulation," International Conf on Power Electronics and Drive Systems, Singapore, Feb 21-24, 1995, pp.519-524.
- Tseng K.J. and Chen G.H., "Design of wheel motor using Maxwell 2D Simulator," International Conf on Energy Management and Power Delivery, Singapore, Nov 21-23, 1995, pp.634-639.
- Tseng K.J. and Chen G.H., "Design of a permanent-magnet direct-driven wheel motor drive for electric vehicles," IEEE Power Electronics Specialist Conf, Italy, Jun 23-27, 1996, pp.1933-1939
- Tseng K.J., Wang Y. and Vilathgamuwa D.M., "Development of a dynamic model of electric arc for power electronics simulations," IEEE Industry Applications Society Annual Conference, San Diego, Oct 5-10, 1996.
- Deng J.H., Vilathgamuwa D.M. and Tseng K.J., "Mitigation of conducted EMI in quasi-resonant dc-dc converters by frequency modulation," IEEE Industry Applications Society Annual Conference, San Diego, Oct 5-10, 1996.

- Gong X.H., Foo C.F. and Tseng K.J., "Determination of parasitic impedance of high frequency low profile planar-type transformer winding," International Power Engineering Conference, Singapore, May 21-23, 1997, pp.732-736.
- Pan S., Tseng K.J. and Foo C.F., "Issues in power diode modelling for circuit simulation," PEDS'97, Singapore, May 1997, pp.78-84.
- Vilathgamuwa M., Choi S.S., Tseng K.J. and Zhu X. "Synchronous frame based control of an unified power flow controller," PEDS'97, Singapore, May 1997, pp.844-849.
- Tseng K.J. and Pan S., "Modified charge-control equation for more realistic simulation of power diode characteristics," Power Conversion Conference '97, Nagaoka, Japan, 3-6 Aug 1997, pp.439-444.
- Tseng K.J., "Dynamic model of fluorescent lamp implemented in PSpice," Power Conversion Conference '97, Nagaoka, Japan, 3 -6 Aug 1997, 859-864.
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