

Curriculum Vitae of Dr Joseph D Yan

1 Personal Details

Name: Jiu Dun (Joseph) YAN
Institution: The University of Liverpool
Address: Department of Electrical engineering and Electronics, The University of Liverpool, Brownlow Hill, Liverpool, L69 3GJ

2 Further/Higher Education

August 1981-July 1986, Tsinghua University (China mainland), BEng (ave. 87%, no grading) in Engineering Mechanics awarded in July 1986.

August 1986-December 1988, Tsinghua University (China mainland), MEng (ave. 82%, no grading) in Engineering Thermophysics awarded in December 1988.

November 1994-December 1997, The University of Liverpool, Ph.D awarded in July 1998.

3 Employment

1/12/1988 - 30/9/1994: Head of a research group in the R&D Division of Xi'an High Voltage Apparatus Research Institute, Xian, China (now known as XIHARI)

16/2/1998 - 15/2/2000: Research fellow in the Department of Electrical Engineering and Electronics, University of Liverpool.

16/2/2000 - 30/4/2001: Senior research fellow in the Department of Electrical Engineering and Electronics, University of Liverpool.

1/5/2001 - 31/10/2001: Lecturer on a three-year fixed term contract in the Department of Electrical Engineering and Electronics, University of Liverpool,

1/11/2001 – 30/9/2012 Lecturer in the Department of Electrical Engineering and Electronics, University of Liverpool.

1/10/2012 – Present: Senior lecturer in the Department of Electrical Engineering and Electronics, University of Liverpool.

4 Editorial Boards, Committee Members and Other External Activities

- Technical consultant to KERI Korea (1999 – 2001)
- Member of IEEE (2001 -)
- Visiting professor to Jincheng Polytechnic (2006 -), Shanxi, China.
- Visiting professor to the Faculty of Electrical Engineering at XJTU, (2007 -)
- Senior technical consultant to Pinggao Electrical Co Ltd (2007 -)
- Haitian Scholar of Dalian University of Technology 2007-2009
- Member of Editorial Board of Chinese Journal “High Voltage Apparatus” (2008 -)
- Member of International Scientific Committee of HTPP 11 (European thermal plasma, 2010 -)
- Member of international Scientific Committee of Physics of Switching arcs (FSO), Czech Republic, (2011 –)
- Member of Current Zero Club (2012 -)

5 Awards

- Third state prize for Advances in Technology (China), 1992
- Second prize from Ministry of Mechanical and Electronic Industry (China), 1993

- ABB Best Paper Prize, awarded in the 8th International Conference on Optimisation of Electrical and Electronic Equipment, for achievement in computer simulation of high voltage switching arcs, 2000
- ABB Best Paper Prize, awarded in the 9th International Conference on Optimisation of Electrical and Electronic Equipment, for substantial contribution in computer modelling of new generation of high voltage circuit breaker, 2002

6 Research Experience

- **1998 - 2000**: Developed a PC based computer simulation tools (implemented in PHOENICS) for Reyrolle Switchgear (now part of Siemens) based on fundamental research during my PhD studies. The CAD tools were subsequently used in Reyrolle's design office to guide their product design. The techniques developed in this project were also adopted by Korea companies (LG, Hyosung) and Korea Electromechanical Research Institute (KERI). I was invited to be KERI's technical consultant during 1999 and 2001.
- **2000 – 2001**: Awarded a highly competitive research fellowship to perform spectroscopic diagnosis of plasma parameters of a microwave generated plasma jet. A spectroscopic system immune to microwave interference was set up to diagnose the heavy particle and electron temperatures under different non-LTE conditions, providing baseline data for the verification of a two temperature plasma model for the microwave plasma jet.
- **2001 – 2003**: Co-Investigator, Intelligent monitoring of contact erosion in electrical power apparatus, supported by Toshiba and Mitsubishi, Japan. (£6,000)
- **2004 – 2008**: **Principle investigator**, three-dimensional computer modelling of a twin-jet DC plasma system for nano-powder generation, collaboration with Tetronics UK with financial support from Lee Foundation, Singapore. (£33,000)
- **2004 – 2007**: Co-investigator, IMS2000 project (Extension phase), supported by European funding. Academic coordinator of AMEC project on bio renewable energy generation, involved in 1) optical monitoring of temperature, pH value and biogas generation rate; 2) modelling of biogas production characteristics with different types of feedstock. (£1,500,000)
- **2004 – 2007**: Co-investigator (involved in software and information processing part), Merton Intelligent Monitoring Systems, supported by the Office of the Deputy Prime Minister. (£500,000)
- **2004 – 2004**: Co-investigator, Discrimination of behavioural patterns and Movement Detection, supported by Unilever. (£5,500)
- **2003 – 2006**: **Principle investigator**, Computer simulation of arcs in auto-expansion circuit breakers, Supported by ABB Switzerland and Lee Foundation (£68,000).
- **2006 – 2010**: Co-investigator, Enhanced Management and Performance for a Sustainable UK Energy Infrastructure (Supergen V), responsible for computer simulation part of the project. EPSRC. (£482,475)
- **2006 – 2010**: Co-investigator, Enhanced Management and Performance for a Sustainable UK Energy Infrastructure (Supergen V), responsible for computer simulation part of the project National Grid, (£125,450)
- **2007 – 2010**: **Principle investigator**, Computer simulation of arcs in high voltage puffer circuit breakers. Supported by Henan Pinggao Electric Co. Ltd, China. (£65,894)
- **2009 – 2011**: Co-investigator, KTP project, temperature sensor for power systems. (£128,564)
- **2010 – 2014**: **Principle investigator**, Development of switching arcs models for product design. Supported by Shanghai Siyuan Electric Co Ltd. (£100,000)
- **2010 – 2012**: **Principle investigator**, Computer simulation of arcs in high voltage auto-expansion circuit breakers and experimental study of turbulence at low current, Supported by Henan Pinggao Electric Co. Ltd, China. (£85,210)
- **2010 – 2011**: **Principle investigator**, Further development of the synchronverter technology to increase its technology-readiness level, EPSRC. (£108,363)

- **2012 – 2014: Principle investigator**, Electrical heating and thermal management in switching equipment, Pinggao Group Co Ltd. (£190,000)

7 Published Journal Papers

- 1 Zhao WH, Li JQ and Yan JD, "Temperature measurement of non-steady arcs", IEEE Trans. on Plasma Science, Vol. 25, pp. 828-832, 1997
- 2 Yan JD, Fang MTC and Liu QS, "Dielectric breakdown of a residual SF₆ plasma at 3,000K under diatomic equilibrium", IEEE Trans. on Dielectrics and Electrical Insulation, Vol. 4, pp. 114-119, 1997
- 3 Yan JD and Fang MTC, "Electrical and aerodynamic behaviour of arcs under shock conditions", IEEE Trans. on Plasma Science, Vol. 25, pp. 840-845, 1997
- 4 Yan JD, Fang MTC and W Hall, "The development of PC based CAD tools for auto-expansion circuit breaker design", IEEE Trans. on Power Delivery, Vol.14, pp.176-181, 1999
- 5 Yan JD and Fang MTC, "Visualisation of arcing process in an auto-expansion circuit breaker", IEEE Trans. on Plasma Science, Vol. 27, pp. 40-41, 1999
- 6 Yan JD, Nuttall KI and Fang MTC, "A comparative study of turbulence models for SF₆ arcs in a supersonic nozzle" J. of Physics D: Applied Physics, Vol. 32, pp. 1401-1406, 1999
- 7 Yan JD, Hall WB and Fang MTC, "Experimental and theoretical investigation of an enclosed free burning arc in SF₆", J. of Physics D: Applied Physics, Vol. 33, pp. 1070-1080, 2000
- 8 Fang MTC, Yan JD and Blundell RE, "Recent progress in our understanding of the physical processes in arcs in gas flow", Journal of Technical Physics (Warszawa), Vol. XLI, pp. 227-237, 2000
- 9 Zhang JL, Yan JD and Fang MTC, " Investigation of the effects of pressure ratios on arc behaviour in a supersonic nozzle", IEEE Trans. on Plasma Science, Vol. 28, pp. 1725-1734, 2000
- 10 Yan JD, Fang MTC and Liu QS, "Dielectric recovery of a residual SF₆ plasma between two parallel plane electrodes", IEEE Trans. on Dielectrics and Electrical Insulation, Vol. 8, pp. 129-136, 2001
- 11 Zhang JL, Yan JD, Murphy AB, Hall W and Fang MTC, "Computational investigation of arc behaviour in an auto-expansion circuit breaker contaminated by ablated nozzle vapour", IEEE Trans. on Plasma Science, Vol. 30, pp. 706-719, 2002
- 12 Al-Shamma'a AI, Wylie SR, Lucas J, and Yan JD, "Atmospheric microwave plasma jet for material processing", IEEE Trans. on Plasma Science, Vol. 30, pp. 1863-1871, 2002
- 13 Yan JD, C F Pau, Wylie SR and Fang MTC, "Experimental characterisation of an atmospheric argon plasma jet generated by an 896MHz microwave system", J. of Phys. D: Appl. Phys., Vol. 35, pp. 2594-2604, 2002
- 14 Liau VK, Fang MTC, Yan JD and Al-Shamma'a AI, "A two-temperature model for a microwave generated argon plasma jet at atmospheric pressure", J. of Physics D: Appl. Phys., Vol. 36, pp. 2774-2783, 2003.
- 15 Zhang JL, Yan JD and Fang MTC, "Electrode evaporation and its effects on thermal arc behaviour", IEEE Trans. on Plasma Science, Vol. 32, pp. 1352-1361, 2004
- 16 Dixon CM, Yan JD and Fang MTC, "A comparison of three radiation models for the calculation of nozzle arcs", J. Phys. D: Appl. Phys. Vol. 37, pp. 3309-3318, 2004
- 17 Fang MTC, Zhang JL and Yan JD, "On the Use of Langmuir Probes for the Diagnosis of Atmospheric Thermal Plasmas", IEEE Trans. on Plasma Science, Vol. 33, pp. 1431-1442, 2005
- 18 Li Q and Yan JD, "Computational investigation of the magnetic field distribution in a 145kV/40kA hybrid rotary-arc circuit breaker", IEEE Transactions on Power Delivery, Vol. 21, pp 135-141, 2006.
- 19 Kweon KY, Yan JD, Lee HS, Park KY, Fang MTC, "Swirling flow and its influence on dc arcs in a duo-flow hybrid circuit breaker", J. Phys. D: Appl. Phys., Vol 42, pp 165201-165212, 2009.
- 20 Tang KM, Yan JD, Chapman C and Fang MTC, "Three dimensional modelling of a DC arc plasma in a twin-torch", J. Phys. D: Appl. Phys., Vol 43, pp 345201, 2010

- 21 Wang WZ, Rong MZ, Yan JD, Murphy AB and Spencer JW, Thermophysical properties of nitrogen plasmas under thermal equilibrium and non-equilibrium conditions, *Physics of Plasmas*, Vol 18, pp 113502, 2011
- 22 Wang WZ, Rong MZ, Murphy AB, Wu Y, Spencer JW, Yan JD and Fang MTC, Thermophysical properties of carbon–argon and carbon–helium plasmas, *J. Phys. D: Appl. Phys.*, Vol 44, pp 355207, 2011
- 23 Yan JD, Tang KM and Fang MTC, Coupling of Anode and Cathode Torches Perpendicularly Arranged in a Discharge Chamber , *IEEE Transactions on Plasma Science*, Vol 39, PP 2872 – 2873, 2011
- 24 Wang WZ, Murphy AB, Yan JD, Rong MZ, Spencer JW and Fang MTC, Thermophysical Properties of High-Temperature Reacting Mixtures of Carbon and Water in the Range 400–30,000 K and 0.1–10 atm. Part 1: Equilibrium Composition and Thermodynamic Properties, *Plasma Chem Plasma Process*, Vol 32, pp 75–96, 2012
- 25 Wang WZ, Yan JD, Rong MZ, Murphy AB, and Spencer JW, Thermophysical Properties of High Temperature Reacting Mixtures of Carbon and Water in the Range 400–30 000 K and 0.1–10 atm: Part 2: Transport Coefficients, *Plasma Chem Plasma Process*, Vol 32, pp 495–518, 2012
- 26 Wang WZ, Rong MZ, Yan JD and Wu Y, 'The reactive thermal conductivity of thermal equilibrium and nonequilibrium plasmas: application to nitrogen'. *IEEE Transactions on Plasma science*, Vol 40, pp 980-989, 2012

8 Books

- 27 Jones GR, Spencer JW and Yan JD, Chapter on High Voltage Monitoring, IEE Publication on Advances in High Voltage Engineering, ISBN 0852961588, edited by M Haddad and D Warne.

9 Invited Lectures/Talks

- 28 Yan JD, Pei Y and Fang MTC, The Development of an Object based Simulation Tool for Switching Arcs, *Proceedings of XIX Symposium on Physics of Switching Arc*, Brno Czech Republic, 2011
- 29 Yan JD, “Computer simulation for product design in power transmission systems”, Plenary Talk on UK-China Workshop on Electricity and Energy 2010, Suzhou, China.
- 30 Yan JD, Han SM, Zhan YY, Zhao HF and Fang MTC, “Computer simulation of the arcing process in high voltage puffer circuit breakers with hollow contacts”, *Proceedings of XVIII Symposium on Physics of Switching Arc*, Brno Czech Republic, pp 99-108, 2009
- 31 Wong TM, Yan JD, Ye X, Abrahamsson J and Fang MTC, “Global Thermal and Aerodynamic Environment in High Voltage Auto-Expansion Circuit Breakers, *Proceedings of the XVII Symposium on Physics of switching arc*, Brno, Czech Republic, Vol. II, pp. 37-46, 2007
- 32 Yan JD, “Computer simulation of high voltage circuit breaker arcs”, invited summer school lectures, Xian Jiaotong University, 2005
- 33 Liao VK, Fang MTC, Zhang JL and Yan JD, “Physical mechanisms for energy transfer to anode in atmospheric arc discharges, *Proceedings of the XVI Symposium on Physics of switching arc*, Brno, Czech Republic, Vol. II, pp. 268-277, 2005
- 34 Yan JD, Zhang JL, Kweon KY, Dixon CM and Fang MTC, “Computer simulation of high voltage circuit breakers”, the XVth International Conference on Gas Discharges and their Applications, Toulouse, France, pp. 1025-1034, 2004
- 35 Yan JD, Kweon KY, Liao VK, Zhang JL, Dixon CM and Fang MTC, "Computer Simulation of Plasmas in Switching and Material Processing Applications", *Proceedings of the XV Symposium on Physics of switching arc*, Brno, Czech Republic, Vol. II, pp. 278-287, 2003
- 36 Fang MTC, Yan JD, Zhang JL, Dixon CM and Hall W, "Computer simulation as a design aid for circuit breakers", *Proceedings of the XIV Symposium on Physics of switching arc*, Brno, Czech Republic, Vol. II, pp. 260-271, 2001

- 37 Fang MTC and Yan JD, "Common problems encountered in computer simulation of gas blast arcs", Proceedings of the 3rd International Conference on Electric Contacts, Arcs, Apparatus and their Applications, Xi'an, China, Vol. 1, pp. 1-9, 1997
- 38 Fang MTC, Yan JD, Kwan S and Hall W, "Application of CFD packages for the simulation of gas blast arcs", Proceedings of the XII International Symposium on Physics of Switching Arc, Brno, Czech Republic, Vol.2, pp. 13-22, 1996

10 Refereed Conference Papers

- 39 Zhang Q, Yan JD and Fang MTC, Computer aided design studies of auto-expansion circuit breakers, Proceedings of the XIX International Conference on Gas Discharges and Their Applications, Beijing, China, pp 82-85, 2012
- 40 Pei Y and Yan JD, An object based approach for defining and implementing switching arc models, Proceedings of the XIX International Conference on Gas Discharges and Their Applications, Beijing, China, pp 138-141, 2012
- 41 Wang H, Yan JD, Wu J and Li Y, Turbulence models for transient switching arcs, Proceedings of the XIX International Conference on Gas Discharges and Their Applications, Beijing, China, pp 194-197, 2012
- 42 Wang WZ, Yan JD, Rong MZ and Spencer JW, Two-temperature modelling of SF₆ arc behaviour in a supersonic nozzle, Proceedings of the XIX International Conference on Gas Discharges and Their Applications, Beijing, China, pp 198-201, 2012
- 43 Zhng Q, Yan JD and Fang MTC, Modelling of turbulent arc burning in a supersonic nozzle, Proceedings of the XIX International Conference on Gas Discharges and Their Applications, Beijing, China, pp 202-205, 2012
- 44 Wang WZ, Yan JD, Rong MZ and Spencer JW, Two-temperature thermodynamic and transport properties of SF₆ plasmas, Proceedings of the XIX International Conference on Gas Discharges and Their Applications, Beijing, China, pp 812-815, 2012
- 45 Wang WZ, Yan JD, Murphy AB, Spencer JW, Rong MZ and Fang MTC, Thermophysical Properties Of Thermal Equilibrium And Non-Equilibrium Nitrogen Plasmas, Proceedings of XIXth Symposium on Physics of Switching Arc, Brno, Czech Republic pp 339-342, 2011
- 46 Wang WZ, Yan JD, Murphy AB, Spencer JW, Rong MZ and Fang MTC, Composition and Thermodynamic Properties of High Temperature Mixtures of Carbon And Water Vapour, Proceedings of XIXth Symposium on Physics of Switching Arc, Brno, Czech Republic, pp 343-346, 2011
- 47 Yan JD, Zhan YY, Wang HY and Fang MTC, "Interactive Visualised Computer Simulation of Switching Arcs", Proceedings of the XVIII International Conference on Gas Discharges and Their Applications, Greifswald, Germany, pp 126-129, 2010.
- 48 Wang HY, Zhan YY, Yan JD and Fang MTC, "Modelling of low current turbulent nozzle arcs with temperature gradient correction", Proceedings of the XVIII International Conference on Gas Discharges and Their Applications, Greifswald Germany, pp 90-93, 2010
- 49 Liau1 VK, Fang MTC and Yan JD, "Anode boundary layer of an atmospheric free Burning argon arc", Proceedings of the XVIIth International conference on Gas Discharges and their Applications, Cardiff, UK, pp 173 –176, 2008
- 50 Tang KM, Yan JD, Chapman C, and Fang MTC, "Computational investigation of a dc arc plasma using a three-dimensional CFD model", Proceedings of the XVIIth International conference on Gas Discharges and their Applications, Cardiff, UK, pp 217-220, 2008
- 51 Zhan YY, Tang KM, and Yan JD, "Computer simulation of the formation and development of a transient arc in vaporised environment of liquid", Proceedings of the XVIIth International conference on Gas Discharges and their Applications, Cardiff, UK, pp 221-224, 2008
- 52 Looe, HM, Yan JD and Spencer JW, "Development of a non-SF₆ self-blast type interrupter", Proceedings of the XVIIth International conference on Gas Discharges and their Applications, Cardiff, UK, pp 117-120, 2008
- 53 Yan JD, Wong TM, Ye X, Abrahamsson J and Fang MTC, "Evolution of flow and thermodynamic environment for thermal interruption in an auto-expansion circuit breaker",

- Proceedings of the XVIth International conference on Gas Discharges and their Applications, Xi'an, pp 173 –176, 2006
- 54 Yan JD, Wong TM, Ye X, Claessens M and Fang MTC, "A comparative study of two existing arc models for auto-expansion circuit breakers", Proceedings of the XVIth International Conference on Gas Discharges and their Applications, Xi'an, pp. 157 –160, 2006
 - 55 Liao, VK, Fang, MTC, Zhang JL and Yan JD, "Physical mechanisms for energy transfer to anode in atmospheric arc discharges", Proceedings of the XVI Symposium on Physics of switching arc, Brno pp 268-277, 2005
 - 56 Liao VK, Zhang JL, Yan JD and Fang MTC, "A two-temperature model for the anode sheath of an argon free burning arc, Proceedings of the XVth International Conference on Gas Discharges and their Applications, Toulouse, France, pp. 113 –116, 2004
 - 57 Kweon KY, Yan JD, Park KY, Song WP and Fang MTC, "A computational investigation into the high current arcing process of a 25.8kv permanent magnet-assisted auto-expansion interrupter", Proceedings of the XVth International Conference on Gas Discharges and their Applications, Toulouse, France, pp. 37 –40, 2004
 - 58 Zhang JL, Fang MTC and Yan JD, "Disturbances Caused by the Insertion of a Langmuir Probe in Thermal Plasmas", Proceedings of the XVth International Conference on Gas Discharges and their Applications, Toulouse, France, pp. 179 –182, 2004
 - 59 Li Q, Yan JD and Fang MTC, "Computational Investigation of the Magnetic Field Distribution in a 145kV/40kA Hybrid Rotary-Arc Circuit Breaker", Proceedings of the 9th International Conference on Optimisation of Electrical and Electronic Equipment, Brasov, Romania, Vol.1, pp.219 – 225, 2004
 - 60 Zhang JL, Fang MTC, and Yan JD, "Can Langmuir probe be used for the diagnosis of atmospheric plasmas with gas motion?", Proceedings of 16th International Symposium on Plasma Chemistry, Taormina, Italy, pp. 88-, 2003
 - 61 Tonge H, Deakin AG and Yan JD, "Anaerobic digestion in waste reduction - The challenge ", Proceedings of the International Symposium on Recycling and Reuse of Waste Materials, Edited by Ravindra K Dhir, Moray D Newlands and Judith E Halliday, Thomas Telford Publishing, ISBN 0 7277 3252 8, held in the University of Dundee, Scotland, UK, pp. 213-222, 2003
 - 62 Jones GR, Deakin AG, Yan JD and Spencer JW, "Prognostic intelligent monitoring of energy systems", Proceedings of Euro TechCon 2003, Manchester, UK, pp. 157-178, 2003
 - 63 Liao VK, Fang MTC and Yan JD, "Self-consistent modelling of an atmospheric argon plasma jet sustained by microwave power", Ibid, Proceedings of 16th International Symposium on Plasma Chemistry, Taormina, Italy pp269-, 2003
 - 64 Kweon KY, Yan JD and Fang MTC, "Computer simulation of SF₆ arcs in a duo-flow hybrid circuit breaker", Proceedings of the XV Symposium on Physics of switching arc, Brno, Czech Republic, Vol. I, pp. 122-125, 2003
 - 65 Kweon KY, Yan JD, Song WP and Fang MTC, "Swirling flow and its influence on high current dc arcs", Proceedings of the XIV International Conference on Gas Discharges and their Applications, Liverpool, UK, Vol. 1, pp. 67-70, 2002
 - 66 Zhang JL, Yan JD and Fang MTC, "Prediction of arc behaviour during the current zero period in an auto-expansion circuit breaker", Proceedings of the XIV International Conference on Gas Discharges and their Applications, Liverpool, UK, Vol. 1, pp. 131-134, 2002
 - 67 Liao VK, Yan JD and Fang MTC, "Computer modelling of a two-temperature microwave generated argon plasma get at atmospheric pressure", Proceedings of the XIV International Conference on Gas Discharges and their Applications, Liverpool, UK, Vol. 1, pp. 139-142, 2002
 - 68 Al-Shamma'a AI, Wylie SR, Lucas J and Yan JD, "Laser assisted high pressure microwave generated plasma for material processing", Proceedings of the XIV International Conference on Gas Discharges and their Applications, Liverpool, UK, Vol. 2, pp. 24-27, 2002

- 69 Liao VK, Yan JD, and Fang MTC, "Computer simulation of an argon plasma jet at atmospheric pressure", Proceedings of 12th International Conference on Computer Technology in Welding and Manufacturing, Sydney, Australia, August 2002, Paper 77
- 70 Dixon CM, Fang MTC, and Yan JD, "Computer simulation of a wall stabilised arc subjected to a transverse magnetic field", Proceedings of the 8th International Conference on Optimisation of Electrical and Electronic Equipment, Brasov, Romania, Vol.1, 2002, pp.111-114
- 71 Yan JD, Dixon CM and Fang MTC, "The effects of swirling flow on arc behaviour in a rotary arc circuit breaker", Proceedings of the 8th International Conference on Optimisation of Electrical and Electronic Equipment, Vol.1, 2002, pp.105-108
- 72 Zhang JL, Yan JD and Fang MTC, "Influence of cathode vaporisation on arc characteristics in a supersonic nozzle", Proceedings of the XIV Symposium on Physics of switching arc, Brno, Czech Republic, Vol. I, pp. 177-180, 2001
- 73 Zhang JL, Yan JD, Murphy AB and Fang MTC, "Effects of wall ablation on the arc behaviour in an auto-expansion circuit breaker", Proceedings of the XIV Symposium on Physics of switching arc, Brno, Czech Republic, Vol. I, pp. 181-184, 2001
- 74 Yan JD, Pau CF and Fang MTC, "A two-temperature model for simulation of microwave-generated argon plasma at atmospheric pressure", Proceedings of International Conference on Phenomena in Ionised Gases, Nagoya, Japan, Vol. II, pp. 237-238, 2001
- 75 Pau CF, Yan JD and Fang MTC, "Departure from local thermodynamic equilibrium in microwave-generated argon plasma jet at atmospheric pressure", Proceedings of International Conference on Phenomena in Ionised Gases, Nagoya, Japan, Vol. III, pp. 309-310, 2001
- 76 Zhang JL, Yan JD and Fang MTC, "The effects of anode vaporisation on arc behaviour in a supersonic nozzle", Proceedings of International Conference on Phenomena in Ionised Gases, Nagoya, Japan, Vol. III, pp. 311-312, 2001
- 77 Yan JD, Zhang JL, Murphy AB, Hall WB and Fang MTC, "Arc behaviour in the mixture of SF₆ and PTFE vapour in an auto-expansion circuit breaker", Proceedings of the XIII International Conference on Gas Discharges and their Applications, Glasgow, UK, pp. 58-61, 2000
- 78 Dixon CM, Yan JD and Fang MTC, "Theoretical and experimental investigation of a free burning arc in an enclosed space", Proceedings of the XIII International Conference on Gas Discharges and their Applications, Glasgow, UK, pp. 86-89, 2000
- 79 Paul CF, Yan JD and Wylie SR, "The influence of gas flow rate and microwave source power on the behaviour of a microwave generated argon plasma", Proceedings of the XIII International Conference on Gas Discharges and their Applications, Glasgow, UK, pp. 585-588, 2000
- 80 Zhang JL, Yan JD, Murphy AB and Fang MTC, "The effects of nozzle ablation on arc behaviour", Proceedings of the 7th International Conference on Optimisation of Electrical and Electronic Equipment, Brasov, Romania, pp. 193-196, 2000
- 81 Zhang JL, Yan JD, and Fang MTC, "Thermal recovery of ac nozzle arcs under different pressure ratios", Proceedings of the 7th International Conference on Optimisation of Electrical and Electronic Equipment, Brasov, Romania, pp. 197-200, 2000
- 82 Yan JD and Fang MTC, "Modelling of auto-expansion circuit breaker arcs at high current levels", Proceedings of the 7th International Conference on Optimisation of Electrical and Electronic Equipment, Brasov, Romania, pp. 201-204, 2000
- 83 Paul CF Yan JD, Wylie SR, "Correlation between operational and plasma parameters for an argon plasma jet generated by a rectangular resonant cavity", Proceedings of the 7th International Conference on Optimisation of Electrical and Electronic Equipment, Brasov, Romania, pp. 211-214, 2000
- 84 Zhang JL, Yan JD and Fang MTC, "Arc behaviour in a supersonic nozzle at different pressure ratios", Proceedings of International Conference on Phenomena in Ionised Gases, Warsaw, Poland, Vol. II, pp. 181-182, 1999

- 85 Pau CF, Yan JD and Wylie SR, "Spectroscopic investigation on an argon-hydrogen plasma jet generated by a rectangular microwave resonant cavity", Proceedings of International Conference on Phenomena in Ionised Gases, Warsaw, Poland, Vol. II, pp. 47-48, 1999
- 86 Yan JD, Blundell RE and Fang MTC, "A Comparative study of turbulence models for SF₆ arcs in supersonic nozzle", XIIIth Symposium on Physics of Switching Arc, Vol. I, pp. 37-40, Slapanice u Brna, Czech Republic, 1998
- 87 Yan JD, Hall W, Blundell RE and Fang MTC, "Computer simulation of an electric arc in an auto-expansion circuit breaker", XIIIth Symposium on Physics of Switching Arc, Vol. I, Slapanice u Brna, Czech Republic, 1998
- 88 Yan JD, Fang MTC and Hall W, "The development of PC based CAD tools for auto-expansion circuit breaker design", IEEE Summer Power Meeting, Paper No. PE-282-PWRD-0-04-1998, 1998
- 89 Yan JD, Fang MTC, Hall W and Popov M, "Experimental and theoretical investigation of an enclosed free burning arc", Proceedings of 6th International Conference on Optimisation of Electrical and Electronic Equipment, Vol.1, pp. 211-214, Brasov, Romania, 1998
- 90 Yan JD and Fang MTC, "The effects of self-induced magnetic field on a high current SF₆ arc in a supersonic nozzle", Proceedings of the XXIII International Conference on Phenomena in Ionised Gases, Toulouse, France, Vol. 2, pp. 148-149, 1997
- 91 Blundell RE, Fang MTC and Yan JD, "The stability of argon arcs in axially accelerating flow", Proceedings of the XXIII International Conference on Phenomena in Ionised Gases, Toulouse, France, Vol. 2, pp. 150-151, 1997
- 92 Yan JD, Hall WB and Fang MTC, "Simplified model for a free burning arc in a sealed pot", Proceedings of the XII International Symposium on Physics of Switching Arc, Brno, Czech Republic, Vol. 1, pp. 82-85, 1996
- 93 Fang MTC and Yan JD, "Plasma chemistry and the breakdown of a residual SF₆ plasma", Proceedings of XXI International Conference on Phenomena in Ionised Gases, Bochum, Germany, pp. 195-196, 1993
- 94 Fang MTC, Yan JD and Liu QS, "Dielectric recovery of residual plasma after thermal extinction", Proceedings of the 2nd International Conference on Electrical Contacts, Arcs, Apparatus and Applications, Xi'an, China, pp. 30-34, 1993
- 95 Zhao WH and Yan JD, " Spectroscopic diagnostics of the temperature field of alternating current arcs (in Chinese)", Proceedings of 4th National Conference on Electrical Contacts and Arcs, Liuzhou, China, pp. 39-40, 1988