

## **List of Publications**

### **Patent**

Putrus G.A., Ahmed M.M.R., Ran L., Xiao L., Penlington R. and May S., "A Hybrid Fault Current Limiting and Interrupting Device" Patent no GB2375902, November 2004.

### **Journal papers**

- 1 Al-Tikriti M.N., Jabouri M.Y., Putrus G.A. and Al-Fakhri W.A., "Digitally controlled power-factor correction system", AMSE periodicals on Modelling, Simulation, and Control, Vol.9, No.1, 1987, pp. 9-19.
- 2 Al-Shalji A., Putrus G.A. and Kamal A., "The use of microcomputer for spectral analysis with the Fast Fourier Transform", Journal of Space and Astronomy Research, Vol.4, No.1, Feb.1987, pp.73-102.
- 3 Wijayakulasooriya J.V., Putrus G.A. and Minns P.D., "Electric Power Quality Disturbance Classification Using Self-Adapting Artificial Neural Networks", IEE Proceedings, Generation, Transmission and Distribution, Vol. 149, No. 1, January 2002, pp 98-101.
- 4 Ran L., Holdsworth L. and Putrus G.A., "Dynamic Selective Harmonic Elimination of a Three-Level Inverter Used for Static VAR Compensation", IEE Proceedings, Generation, Transmission and Distribution, Vol. 149, No. 1, January 2002, pp 83-89.
- 5 Liao Y., Ran L., Putrus G.A. and Smith K.S. "Evaluation of the Effects of Rotor Harmonics in a Doubly-fed Induction Generator with Harmonic Induced Speed Ripple", IEEE Transactions on Energy Conversion, Vol. 18, No. 4, December 2003, pp. 508-515.
- 6 Ahmed M.M.R. and Putrus G.A., Ran L. and Xiao L., "Harmonic Analysis and Improvement of a New Solid-State Fault Current Limiter" IEEE Transactions on Industry Applications, Vol. 40, No. 4, July/August 2004, pp. 1012-1019.
- 7 Wijayakulasooriya J.V., Putrus G.A. and Ng C.H., "Fast Non-Recursive Extraction of Individual Harmonics Using Artificial Neural Networks", IEE Proceedings, Generation, Transmission and Distribution, Vol. 152, No. 4, July 2005, pp 539-543.
- 8 Ng C. H., Busawon K, Putrus G.A. and Ran L, "Fast Individual Harmonic Extraction Technique" IEE Proceedings, Generation, Transmission and Distribution Vol. 152, No. 4, July 2005, pp 556-562.
- 9 Mahmud S., Abdullah M.J. and Putrus G.A. "Increase in Upturn Power Dissipation of Surge Suppressors Due to Highly Defective Nanostructure of Zinc Oxide", Journal of Synthesis and Reactivity in Inorganic, Metal-Organic and Nano-Metal Chemistry, Vol. 36 No. 01, 2006, pp. 59-64.
- 10 Mahmud S., Abdullah M.J., Putrus G.A., Chong J. and Mohamad A.K, "Nanostructure of ZnO Fabricated via French Process and its Correlation to Electrical Properties of Semiconducting Varistors" Journal of Synthesis and Reactivity in Inorganic, Metal-Organic and Nano-Metal Chemistry, Vol. 36, No. 02, 2006, pp155-159.
- 11 Ahmed M.M.R. and Putrus G.A., Ran L. "Development of a Prototype Solid-State Fault Current Limiting and Interrupting Device (FCLID) for Low Voltage Distribution Networks", accepted for publication in IEEE Transactions on Power Delivery, 2006.

### **Invited paper/presentation/lecture/plenary address**

- 1 Cooper C.B., Ekanayake J.B., Jenkins N. and Putrus G.A., "Modelling plant for flexible ac transmission systems", IEE Colloquium on FACTS-the key to increased utilisation of a power system, London, Jan. 1994, Digest No. 1994/005, pp. 3/1-3.
- 2 Putrus G.A., Jenkins N. and Cooper C.B., "A static fault current limiting and interrupting device", IEE Colloquium on Fault current limiters - A look at tomorrow, London, 8 June 1995, Digest No. 1995/026, pp.5/1-6.
- 3 Minns P.D., Putrus G.A. and Wijayakulasooriya J.V., "Intelligent power quality monitoring system", IEE Colloquium on "Power Quality: Monitoring and Solutions", London, November 2000.
- 4 Putrus G.A., Wong W., Jenkinson D., "Implementing the CD Machine Directive in the UK", invited plenary address in Valencia Global 2002 International Conference, April 2002.
- 5 Putrus G.A., "Fault Current Limiters" invited lecture at Chongqing University, China, October 2002.
- 6 Putrus G.A., "Implications, with Particular Emphasis on Distribution Networks, of the Widespread Application of Power Electronic Systems" Eleventh International IEE Residential Course on High Voltage Engineering & Testing, 13-18 July 2003, Newcastle upon Tyne, UK
- 7 Putrus G.A. and Evans G., "Distributed Generation Challenges Ahead" Chairman's address, IEE Northumbria Branch, October 2004.
- 8 Putrus G.A., Wijayakulasooriya J.V., Ng C.H. and Minns P., "Disturbance extraction for power quality monitoring and mitigation", IEE Seminar on "Power - it's a Quality Thing", London, February 2005.
- 9 Putrus G.A., "Power Electronic Systems: a problem or a solution" Twelfth International IEE School on High Voltage Engineering & Testing, 17-22 July 2005, Newcastle upon Tyne, UK
- 10 Putrus G.A., White S., Ramachandran J., Maloyd A. and Pearsall N., "Integration of Small Scale Embedded Generation in Low Voltage Power Distribution Networks", The 12th International Stirling Engine Conference and Technology Exhibition, Durham, UK, Sept. 2005.
- 11 Putrus G.A., "Power Electronics Applications in Distribution Networks" Thirteenth IET International Course on High Voltage Engineering and Testing, 16-21 July 2006, Newcastle upon Tyne, UK.
- 12 Putrus G.A., Ramachandran J. and Maloyd A., "Performance of LV Distribution Networks with Significant SSEG", First International Conference on Industrial and Information Systems (ICIIS 2006), 8-11 August 2006, Peradeniya, Sri Lanka.

### **Referred Conference papers**

- 1 Ashok Kumar B.S., Mohammad M.Z. and Putrus G.A., "Power system fault detection by digital techniques", IMEKO Symposium on Computerized Measurement, Yugoslavia, Sept. 1981, pp.213-216.
- 2 Al-Tikriti M.N., Putrus G.A., Jabouri M.Y. and Al-Fakhri W.A., "Digital power-factor and phase angle meter", Proceedings of the 4<sup>th</sup> Scientific Conference, Scientific Research Council, Iraq, Oct. 1986.

- 3 Putrus G.A. and Cooper C.B., "Experimental study of a UFC laboratory model employing GTO thyristors", 30<sup>th</sup> Universities Power Engineering Conference (UPEC'95), Greenwich, 5-7 Sept. 1995, Vol.2, pp. 431-434.
- 4 Putrus G.A., Jenkins N. and Cooper C.B., "A static fault current limiter and circuit breaker", UPEC'96 Conference Proceeding, Greece, Sept. 1996, Vol.3, pp. 925-928.
- 5 Putrus G.A., "Principles of switching power converters", UPEC'96 Conference Proceeding, Greece, Sept. 1996, Vol.2, pp. 653-656.
- 6 Wijayakulasooriya J.V., Putrus G.A. and Minns P.D., "Image techniques based on time-frequency distributions for power quality monitoring" UPEC'97 Conference Proceeding, UMIST, Sept. 1997, Vol.1, pp. 226-229.
- 7 Holdsworth L. and Putrus G.A., "Investigations into advanced static VAR compenstor malfunctions and adaptive control strategies" UPEC'98 Conference Proceeding, Edinburgh, Sept. 1998, Vol.2, pp. 747-750.
- 8 Wijayakulasooriya J.V., Putrus G.A. and Minns P.D., "Application of wavelet transform in power quality disturbance analysis" UPEC'98 Conference Proceeding, Edinburgh, Sept. 1998, Vol.2, pp. 831-834.
- 9 Farrag M. E. A. and Putrus G. A., "Advanced Control of The Unified Power Flow Controller" UPEC'99 Conference Proceeding, Leicester, Sept. 1999, Vol.1, pp. 74-77.
- 10 Ahmed M.M.R. and Putrus G.A., "Investigation into Custom Power Technology" UPEC'99 Conference Proceeding, Leicester, Sept. 1999, Vol.2, pp. 509-512.
- 11 Farrag M. E. A., Putrus G. A. and Ran L., "Analysis of a Transmission System Incorporating a UPFC for Optimum Power Flow Control", UPEC'2000 Conference Proceeding, Belfast, Sept. 2000.
- 12 Ahmed M.M.R. and Putrus G.A., Ran L. and Xiao L., "Harmonic Analysis And Improvement of a New Solid-State Fault Current Limiter " IEEE Rural Electric Power Conference Proceeding, Arkansas, USA, May 2001, D5/1-8.
- 13 Putrus G.A., Ahmed M.M.R. and Ran, L. " Improving Current Sharing Between Parallel Varistors " IEEE, ISIE International Symposium on Industrial Electronics Proceedings, Pusan, Korea, June 2001, Vol2, pp. 1324-1327.
- 14 Ahmed M.M.R., Putrus G.A., Ran L. and R. Penlington "Measuring the Energy Handling Capability of Metal Oxide Varistors " IEE CIRED Conference Proceeding, Vol.1, No. 482, Amsterdam, June 2001.
- 15 Ran L., Holdsworth L. and Putrus G.A., "Elimination of low order harmonics in a three-level inverter used for Static VAR Compensation", Proceedings of the 9<sup>th</sup> European Conference on Power Electronics and Applications, EPE2001, August 2001, Graz, Austria, pp.1-7.
- 16 Farrag M. E. A., Putrus G. A. and Ran L., "Using PWM Control to Improve the Speed of Response of the Advanced Static VAR Compensator", UPEC'2001 Conference, Swansea, Sept. 2001.
- 17 Lee Holdsworth, Ghanim A. Putrus and Li Ran "A New Adaptive Discharge-Path-Protection-Switch Clamped Multilevel Inverter", Proceedings of PowerCon-2002, IEEE/PES-CSEE International Conference on Power System Technology, Kunming, China, October 2002, Vol. 1, pp. 590-594.
- 18 Hu Y., McCormick M., Haydock L., Cirstea M. and Putrus G.A. "Advanced Hybrid Variable Speed Controller for Stand-Alone Diesel Engine Driven Generator Systems",

- Proceedings of PowerCon-2002, IEEE/PES-CSEE International Conference on Power System Technology, Kunming, China, October 2002, Vol.2, pp.711-715.
- 19 Ahmed M.M.R. and Putrus G.A., Ran L. "Power Quality Improvement using a solid-state fault current limiter", IEEE/PES Transmission and Distribution Conference, Yokohama, Japan, October, 2002, Vol 2, pp. 1059-1064.
  - 20 Ahmed M.M.R. and Putrus G.A., Ran L. "Predicting IGBT Junction Temperature Under transient Conditions" Proceedings of IEEE-ISIE2002, International Symposium on Industrial Electronics, L'Aquila, Italy, July 2002, Vol. 3, pp 874-877.
  - 21 Ng C. H., Ran L., Putrus G.A. and Busawon K. "Analysis of Aliasing in Active Power Harmonics Filter" UPEC'2002 Conference Proceeding, Stafford, Sept. 2002.
  - 22 Farrag M. E. A., Putrus G. A. and Ran L., "Real Time Hybrid Control System for the Advanced Static VAR Compensator" UPEC'2002 Conference Proceeding, Stafford, Sept. 2002.
  - 23 Jayaraman R., Pearsall N.M. and Putrus G.A. "Optimal Sizing of Inverters for Grid-Connected PV Systems" UPEC'2002 Conference Proceeding, Stafford, Sept. 2002.
  - 24 Ran L., Smith K.S., Liao Y. and Putrus G.A. "Calculation of Transformer Core Losses with Non-linear Loads", IEEE/PES International Conference on Harmonics and Quality of Power, Rio de Janeiro, Brazil, October, 2002, Vol.2, pp. 682-687.
  - 25 Liao Y., Xiang D., Ran L. and Putrus G.A. "Analysis of Harmonic Transfer in a.c. Excited Generator Including Speed Ripple", IECON-2002 28<sup>th</sup> Annual Conference of the IEEE Industrial Electronics Society, Vol. 2, 2002, pp. 1162-1166.
  - 26 Farrag M. E. A., Putrus G. A. and Ran L., "Design of Fuzzy Based-Rules Control System for the Unified Power Flow Controller" Proceedings of The 28th Annual Conference of the IEEE Industrial Electronics Society, Sevilla, Spain, November 2002, Vol.3, pp. 2102-2107.
  - 27 Subsingha W., Busawon K., Putrus G.A. and Ran L., "Robust midvoltage regulation of a power system network using ASVC", Proceedings of the 7<sup>th</sup> IASTED International Conference on Power and Energy Systems (PES 2003), 24-26 February, 2003, Palm Springs, USA, pp 138-142.
  - 28 Subsingha W., Busawon K., Putrus G.A. and Ran L., "Line impedance and power angle estimation for the control of a grid connected synchronous generator", Proceedings of the 22<sup>nd</sup> IASTED International Conference Modelling, Identification, and Control February 10-13, 2003, Innsbruck, Austria, pp 40-44.
  - 29 Farrag M. E. A., Putrus G. A. and Ran L., "Artificial Neural Network Based Adaptive Takagi-Sugeno Fuzzy Like PI Controller For Optimal UPFC Performance" IEEE 7<sup>th</sup> International Conference on Intelligent Engineering Systems, Assiut, Egypt 4-6 March 2003, pp. 312-316.
  - 30 Jayaraman R., Pearsall N.M. and Putrus G.A., "Impact of Inverter Size on PV System Energy Production and Cost", UPEC'2003 Conference Proceeding, Greece, Sept. 2003.
  - 31 Ng C. H., Ran L., Putrus G.A. and Busawon K. "A new approach to real time individual harmonic extraction", IEEE 5<sup>th</sup> International Conference on Power Electronics and Drive Systems, 2003, Vol.1, pp 825-829.
  - 32 Putrus G.A., Ahmed M.M.R., Ran L., Chu K.R. and Funabashi T. "Integration of Fault Current Limiters in Power Distribution Networks", IEE International conference on "Developments in Power System Protection", Amsterdam, Netherlands, April 2004.

- 33 Ponugubati M.K.C., Penlington R., Putrus G.A., "Development of Specifications for a Thermal Buffer Device", UPEC'2004 Conference Proceeding, Bristol, Sept. 2004.
- 34 Ahmed M.M.R., Putrus G.A. and Shokralla S.S., "A new approach for speed control of a d.c. motor fed from ac to dc Sepic converter", 18th International Conference on Electricity Distribution CIRED, Turin, Italy, June 2005.
- 35 Mahmud S., Abdullah M.J. and Putrus G.A. "Increase in upturn power dissipation of surge suppressors due to highly defective nanostructure of zinc oxide", International Conference on Nanomaterials, Nano 2005, Tamilnadu, India, July 2005.
- 36 Ponugubati M.K.C., Penlington R., Putrus G.A., "Improving the Heat Dissipation in Surge Suppression Devices by Use of Phase Change Materials", UPEC'2005 Conference proceedings, Cork, Ireland, Sept. 2005.
- 37 Ahmed M.M.R. and Putrus G.A., "Fuzzy Logic Speed Control of D.C. Motors Fed by Single-Ended Primary Inductance Converters (Sepic)", UPEC'2006 Conference Proceeding, Newcastle upon Tyne, Sept. 2006.

### Theses

- 1 Putrus G.A., "Off line analysis for high speed protection of power systems", MSc thesis submitted to the College of Engineering, University of Mosul, Iraq, March 1981.
- 2 Putrus G.A., "A laboratory model solid-state VAR compensator", PhD thesis submitted to the University of Manchester Institute of Science and Technology (UMIST), 1990.