## Curriculum Vitae - Prof J R Lucas

1 Full Name: Professor Joseph Rohan Lucas

2 Contact Details:

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### 3 Personal Profile

An Emeritus Professor in Electrical Engineering with over 40 years of postdoctoral experience in teaching, research and professional experience in Sri Lanka, United Kingdom, Canada and New Zealand. A team leader, who has risen to the top rugs of the Electrical Engineering Profession, including a term as Chairman of the Sri Lanka Branch of the prestigious Institution of Electrical Engineers UK.

In recognition of his contributions, he has been bestowed the Research Excellence Award and the Teaching Excellence Award by the University of Moratuwa, and the Engineering Excellence Award by the Institution of Engineers Sri Lanka. Having retired from formal employment on 31st March 2014, he continues to serve society in various capacities, including academic and as an Electrical Consultant

## **4 Present Employment**

Senior Consultant and Emeritus Professor, Department of Electrical Engineering, University of Moratuwa (from1 April 2014)

Senior Professor, Sir John Kotalawela Defence Academy, Ratmalana

## 5 Previous Employment

Senior Professor, Department of Electrical Engineering, University of Moratuwa (from10 October 1999 to 31 March 2014)

Professor, Department of Electrical Engineering, University of Moratuwa (10 October 1994 – 9 October 1999)

Associate Professor, Department of Electrical Engineering, University of Moratuwa (10 October 1989 – 9 October 1994)

Lecturer & Senior Lecturer, Department of Electrical Engineering, University of Moratuwa (13 March 1970 – 9 October 1989)

Head, Department of Electrical Engineering, University of Moratuwa (from 1998 to 2004)

### 6 Tertiary Education:

Qualification: B Sc Engineering Honours Institution: University of Ceylon

Period of studies: October 1966 to August 1969

Qualification: M Sc

Institution: University of Manchester Institute of Science & Technology, UK

Period of studies: October 1971 to October 1972

Qualification: PhD

Institution: University of Manchester Institute of Science & Technology, UK

Period of studies: October 1972 to October 1974

### 7 Membership of Professional Bodies:

Institution of Engineers, Sri Lanka Fellow (Chartered Engineer)

Institution of Engineers, Sri Lanka IPEng (International Professional Engine Institution of Electrical Engineers (UK) Fellow (Chartered Electrical Engineer)

Computer Society of Sri Lanka Member (Founder Member)

Sri Lanka Energy Managers Association Member

Sri Lanka Association for the Advancement of Science (Life Member)



## 8 Teaching

Subjects taught presently

- Fundamentals of Electrical Engineering, in Semester 1 for 250 Engineering students, KDU
- Theory of Electricity in Semester 2 for 225 Electrical Eng. and Computer Science & Eng, and in Semester 3 - 125 Electronics & Telecom Eng. Students, UoM
- Theory of Electricity In Semester 2 for 170 EE, ET, BM, ME, MT Eng. students, KDU
- High Voltage Engineering in Semester 5 for 50 electrical Eng. Students, KDU
- High Voltage Engineering 1 in Semester 7 course for 100 Electrical Eng. students, UoM
- High Voltage Engineering 2 in Semester 8 for 100 Electrical Eng. students, UoM
- Protective Measures in Electrical Installations in Semester 1 for 35 students, PGDiploma/MSc in Electrical Installations, UoM
- Lightning Protection and Earthing in Semester 2 for 50 students, PGDiploma/MSc in Electrical Installations, PGDiploma/MSc in Electrical Engineering UoM

### 9 Visiting Appointments Abroad

Visiting Commonwealth Research Fellow, UMIST, Manchester, England (Oct 81 - Sep 82)

Visiting Professor, University of Manitoba, Canada (Sep 89 – Aug 90)

Erskine Fellow and Visiting Professor, University of Canterbury, New Zealand (May 97 - Dec 97)

Visiting Professor, University of Auckland, New Zealand (Jan 98 – May 98)

Visiting Professor, University of Manitoba, Canada (Oct 06 – Oct 07)

#### 10 Administrative and Professional Activities

Member, Board of Management of Institute of Technology, University of Moratuwa ((UGC Nominiee from 2016, Elected Representative of Senate up to 2014)

Independent Director, Esna Power (Pvt) Ltd (from January 2014)

Member, University Council ((Elected Representative of Senate up to 2014)

Acting Dean, Faculty of Engineering (March 2001)

Head, Department of Electrical Engineering, from May 1998 to 2004.

Head, Division of Power System and High Voltage Engineering 1981 - 2001

Head, Department of Computer Science & Engineering, December 1988 to July 1989.

Head, Department of Electrical Engineering, July 1983 to June 1984.

Chairman, By-laws Committee (upto 2014)

Chairman, Industrial Training Advisory Board (2010s)

Chairman, Engineering Research Unit, University of Moratuwa from 1994 to 1997

Chairman, Calendar Committee, Faculty of Engineering (up to 1997)

Member, Senate Higher Degrees Committee, Faculty Higher Degrees Committee, Faculty Postgraduate Studies Committee (upto 2014).

Member, Faculty Academic Committee (upto 2014)

Member, Sectoral Committee on Electrical Cables & Conductors, Sri Lanka Standards Institute

Member, Working committee on Lightning, Sri Lanka Standards Institute (upto 2014)

Chairman, Institution of Electrical Engineers, Sri Lanka Centre (2000 & 2001)

Council Member, Institution of Engineers, Sri Lanka (Up to 2000)

International Membership Advisor, Institution of Electrical Engineers, Sri Lanka Branch (1990s)

Council Member, Sri Lanka Standards Institute (1990s)

Member, Technical Committee of Energy Conservation Fund, (1990s)

### 11 Awards for Academic Achievements

Award for Outstanding Academic Performances in 2010

Award for Outstanding Research Performances - 2003 (for the 3 years 2001, 2002, 2003) - approved by Council 18 January 2006, Award Ceremony 28 September 2006

Award for Outstanding Research Performances - 2002 (for the 3 years 2000, 2001, 2002) - approved by Council 18 January 2006, Award Ceremony 28 September 2006

Award for Outstanding Research Performances - 2001 (for the 3 years 1999, 2000, 2001) - approved by Council 18 January 2006, Award Ceremony 28 September 2006

Award of Excellence – Outstanding Research Performances in the 15 years ending 31 December 1999 bestowed by the University of Moratuwa on 16 August 2001

- Prof. E. O. E. Pereira Award for the Best Paper read at the Annual Conference of the Institution of Engineers, Sri Lanka in 1991/92.
- C D E Award for the Best Paper, by a corporate member of the IESL, published in the Journal "Engineer" during 1990/91.
- Award for the Best Paper presented at the I E E (Overseas Branch) by a Student or Associate Member Under 30, in 1975/76.
- Prof. E. O. E. Pereira Award for the Best Paper read at the Annual Conference of the Institution of Engineers, Sri Lanka in 1976.

#### 12 Honours

- Naming of "Rohan Lucas High Voltage Laboratory", 17 October 2017 by the University of Moratuwa
- Emeritus Professor of Electrical Engineering title bestowed by the University of Moratuwa with effect from 1 April 2014 at an Award Ceremony on 30 December 2014
- Excellence in Engineering Award (Individual, Electrical) 2013, Award by the Institution of Engineers, Sri Lanka at an Award Ceremony on 24 September 2013
- Erskine Fellow, University of Canterbury, New Zealand (May 97 Dec 97) [Distinguished, international academic visitors, already advanced in the learning, are invited durations of 1-3 months for the purpose of giving lectures to students of the University].
- The Josephian Honours for Excellence conferred by St. Joseph's College, Colombo 10, 14 February 1997 [recognition of honour and glory brought on his Alma Mater by his outstanding and distinguished service in public life]
- Jaycees Top Outstanding Young Persons Award for Academic Achievements in 1987 [serves to formally recognize young people who excel in their chosen fields and exemplify the best attributes of the world's young people].

# 13 National Contributions

## • Telecommunications Regulatory Commission of Sri Lanka

Electrical Review Consultant, Colombo Lotus Tower

Member, Technical Committee formulating National Policy on Antenna Structure Erection and Guidelines thereon.

#### Ministry of Power and Energy/Ceylon Electricity Board/PUCSL

Member of Technical committee to investigate on all-island power failures (2000-2016)

Chairman of Project to evaluate Generation Limit placed on a single unit to optimise use of coal power, 2010

Member, Steering Committee on the Single Standard for Sockets and Plugs (2016-2018)

## Ministry of Disaster Management/Meteorological Department

Member of Committee to development of a National Centre for Lightning Protection, Carrying out awareness programs on lightning protection islandwide.

### • President's Fund for Innovators and Inventors

Electrical & Electronics sub-committee appointed by HE the President to grant financial assistance (up to Rs 5 million per project) to develop marketable productions and processes. (1990s).

## National Science Foundation

Past Member, Research Committee on Engineering and Built Environment (around 2002), and earlier committees to evaluate of Grantees

#### Sri Lanka Standards Institute

Past Member of the Council, Member/Past Chairman, Sectoral Committee on Electrical Cables & Conductors, Past Member Divisional Committee in Electrical Engineering, Past Member, Working Group on Lightning Protection Systems (2012-2014), Past Member, Product Inspection & Certification Committee, Past Member Drafting Committees

#### 14 Course Textbooks

- 1. "High Voltage Engineering", 1995, Published by University of Moratuwa, Sri Lanka 217 pages, (sole author) course text for UEE403
- 2. "Design of Electrical Installations", 1991, Published by Open University of Sri Lanka, 175 pages (co-authors: Sriyananda et Al) course text for ECD 2223
- "Building Engineering Theory and Design Block 3", 1988, Published by Open University of Sri Lanka, (co-authors: Herath et Al)
- 4. "Protection of Power Systems", 1986/88, Published by Open University of Sri Lanka, 384 pages (co-authors: Sriyananda et Al) course text for TED2302
- 5. "Power System Studies", 1986, Published by Open University of Sri Lanka, 168 pages (co-authors: Sriyananda et Al) course text for TED2304
- "Generation, Transmission & Distribution", 1984/85, Published by Open University of Sri Lanka, 410 pages (co-authors: Sriyananda et Al) - course text for TEC233
- 7. "Introduction to Electrical Machines", 1984/85, Published by Open University of Sri Lanka, 378 pages (co-authors: Sriyananda et Al) course text for TEC232
- 8. "Electrical Measurements", 1984/85, Published by Open University of Sri Lanka, 409 pages (co-authors: Sriyananda et Al) course text for TEC231
- 9. "Principles of Electrical Engineering 2", 1985, Published by Open University of Sri Lanka, 360 pages (co-authors: Sriyananda et Al) course text for TEC132
- 10. "Principles of Electrical Engineering 1", 1983/84, Published by Open University of Sri Lanka, 318 pages (co-authors: Sriyananda et Al) course text for TEC131

### 15 Other Skills:

Resource person for Seminars and workshops conducted for Professionals on Lightning Protection and on Electrical Installations given in annexure 2.

Web Master for Department of Electrical Engineering <a href="http://www.elect.mrt.ac.lk">http://www.elect.mrt.ac.lk</a> (earlier)

Extensive development of web resources such as lecture material, past papers and model answers

Web Master for Institution of Electrical Engineers, Sri Lanka Branch (earlier) <a href="http://www.iee.org/OnComms/Branches/Asia/SriLanka">http://www.iee.org/OnComms/Branches/Asia/SriLanka</a>

### 16 Research Interests

Power system transient analysis & modelling (Fourier, PSCAD/EMTDC) Energy efficient lighting Lightning Protection

## 17 Publications

87 publications in journals and technical conferences.

## 18 Personal Details

Date of Birth: 17 October 1947

Nationality: Sri Lankan Civil Status: Married

Address (Home): 24 1/1 Milagiriya Avenue, Colombo 00400, Sri Lanka

#### Annexure 1 - Publications: Prof J R Lucas

- 1 "Log Periodic Antenna Based Partial Discharge Detector for Condition Monitoring of High Voltage Insulators", 2018 Moratuwa Engineering Research Conference (MERCon), p 1-6, (co-authors: Dinusha Madushani, Dinindu Siriwardhana, Uditha Wijethunge, Rasara Samarasinghe)
- 2 "Modelling Transfer Function of Power Transformers Using Sweep Frequency Response Analysis", 2018 Moratuwa Engineering Research Conference (MERCon), (co-authors: K. L. I. M. Pramod B. Jayarathna, W. E. P. Sampath Ediriweera, R. Samarasinghe)
- 3 "Effect of the Shape of the Insulator on Fractal Characteristics of Creeping Discharges", 2018 Moratuwa Engineering Research Conference (MERCon), p 1-5 (co-authors: W. E. P. Sampath Ediriweera, K. L. I. M. Pramod B. Jayarathna, R. Samarasinghe)
- 4 "A Tool For Estimating Remaining Life Time of a Power Transformer", 2017 Moratuwa Engineering Research Conference (MERCon), p 373-378 (co-authors: W.D.A.G.Hillary, K.L.I.M.P.B. Jayarathna, L.I.Ranasinghe, S.M.B.P. Samarakoon, N.M.T.N.Rathnayake, R. Samarasinghe) 7980513
- "Microstrip Patch Antenna for Partial Discharge detection as a condition monitoring tool of power system assets", 2017 Moratuwa Engineering Research Conference (MERCon), p 368-372, (co-authors: W. E. P. S. Ediriweera, K. S. Priyanayana, R. M. A. P. Rajakaruna, R. A. K. G. Ranasinghe, R. Samarasinghe) 7980512
- "Open conductor fault detection", 2017 Moratuwa Engineering Research Conference (MERCon), p 363-367 (co-authors: D.K.J.S Jayamaha, I.H.N Madhushani, R.S.S.J Gamage, P.P.B Tennakoon, U. Jayatunga) 7980511
- 7 "Wind Turbine Emulator for a Microgrid", International Conference on Innovations in Power and Advanced Computing Technologies [i-PACT2017], p 1-6 (co-authors: K. M. G. Y. Sewwandi, T. S. S. Senarathna, K. A. H. Lakshika, V. Y. Wong, K. T. M. U. Hemapala, G. D. Porawagamage)
- 8 "Operation of a Grid Connected Microgrid with a Variable Load Bus and a Diesel Generator Set", International Conference on Innovations in Power and Advanced Computing Technologies [i-PACT2017], p 1-6 (co-authors: M.K.G. Lakshitha, K.D.M. Jayawardhana, M.A.K.S. Boralessa, W.G.R.W. Rohitha, K.T.M.U. Hemapala, Narendra De Silva, G.D. Porawagamage)
- "A Low Cost Partial Discharge Measuring System for a High Voltage Laboratory", PowerCon 2016, Wollongong, p1-6 (co-authors: S. D. M. S. Gunawardana, A. A. T. Kanchana, H. A. P. B. Perera, P. M. Wijesinghe, R. Samarasinghe) 7753949
- 10 "Power System Simulator A Teaching Tool", Moratuwa Engineering Research Conference (MERCon) 2016, p231-236, (co-authors: R.S.M.Jothimuni, H.M.D.M.B.Wijerathne, C.A.N.Yapa, D.W.N.T.Wijethunga, P.S.N de Silva) 7480145
- 11 "A Methodology to Develop a Distribution Transformer", ENGINEER Vol. XLIX, No. 02, p.51-59, 2016 (co-authors: W.D.A.S. Wijayapala and L.S. Hasthanayake)
- 12 "A low cost partial discharge measuring system for a high voltage laboratory", 2016 IEEE International Conference on Power System Technology (POWERCON), 1-6, September 2016, (co-authors: S Gunawardana, AAT Kanchana, H Perera, PM Wijesinghe, R Samarasinghe)
- 13 "Generation Cost Optimization through a Network Stability Study" –Final Report– LNW Arachchige, JR Lucas, MMS Nakandala, Submitted to PUCSL, July 2016
- 14 "A Methodology to Develop a Distribution Transformer Model for Transient Studies" WDAS Wijayapala, JR Lucas, LS Hasthanayake, Engineer: Journal of the Institution of Engineers, Sri Lanka 49 (2), 2016
- 15 "Capacitance and tan δ measuring equipment for high voltage insulation modelling and simulation" CM Gamage, JM Nupehewa, K Kodikara, SAD Chathuranga, R Samarasinghe, JR Lucas, Moratuwa Engineering Research Conference (MERCon), 2016, 248-253
- 16 "Power System Simulator-a teaching tool protection integration", Moratuwa Engineering Research Conference (MERCon), 2016, 231-236, (co-authors: RSM Jothimuni, H Wijerathne, CAN Yapa, D Wijethunga, JR Lucas, PSN de Silva)
- 17 "Design of an Electronic Governor for a Diesel Generator with Synchronous, Isochronous and Islanded Modes", Trans IESL 2015, Colombo, (co-authors: M.P.L.Jayathilake, K.P.M.Karunanayake, A.M.M. Karunarathna, A.P.M.Kethumalika, P.S.N.De Silva)
- 18 "Automatic governor for tie-line control: A teaching tool", Moratuwa Engineering Research Conference (MERCon), 2015, 82-87, (co-authors: LUN de Silva, D Deegala, IMM Karunathilake, P Kumari, PSN de Silva) 7112325
- 19 "A MATLAB Simulink Model for a Partial Discharge Measuring System", , 1st Electrical Engineering Conference (EECon), Sri Jayawardanapura Kotte, 2015, (co-authors: S Gunawardana, PM Wijesingha, H Perera, AAT Kanchana)

- 20 "A DC Link for the Power System Simulator As A teaching tool," 1st Electrical Engineering Conference (EECon), Sri Lanka, pp. 18-22, 2015 (co-authors: PM Abeyrathne, AMGT Abeysinghe, IM Karunanayake, PMH Ranasinghe, MP Dias)
- 21 "Profile of the Sri Lankan Electrical Engineering Industry", Engineer, Vol.: XLVII, No. 02, April 2014, p9–21 (Co-authors: Buddika Jayasekera, Satish Namasivayam and Lanka Udawatta)
- 22 "Power System Simulator with Vacuum Breakers: A Teaching Tool", IET Sri Lanka YMS Sessions, 2014, (co-authors: C.L Fernando, A.R Devinda, M.H.M Fernando, D.M.S Dissanayaka)
- 23 "Modelling of Mini Hydro Plants in Long Term Planning Studies A Sri Lankan Case Study", Engineer, Vol.: XXXXVI, No. 01, January 2013, p1–10 (Co-authors: N A Mudannayake, and Tilak Siyambalapitiya)
- 24 "Macro Scale Modelling of Wind Plants in Long Term Planning Studies A Sri Lankan Case Study", Engineer Vol.: XXXXVI, No. 01, January 2013, p11–20 (Co-authors: N A Mudannayake, and Tilak Siyambalapitiya)
- "Use of Load Shedding Scheme to Increase the Capacity Limit on the Single Largest Generator", Engineer Vol.: XXXXVI, No. 01, January 2013, p31–36 (Co-authors: C K S Hapuarachchi, M D M C Gunawardena, D P Haputhanthri, I G C Harshana, W D A S Wijayapala)
- 26 "Design and Construction of an Automated Lead Acid Battery Test Bench", IET Sri Lanka Annual Sessions, 2013, p 1-4 (co-authors: R.A.Rathnasinghe, E.Sachintha, T.Sajani, K.S.Samarakoon, H.D.C.K.Samarasekara)
- 27 "Directions for Solving Bad Workman Practices in Power Distribution Line Connections", Engineer, Vol.: XXXXV, No. 03, 2012, p33-44 (Co-authors: AGDP Jayasekara, WDAS Wijayapala)
- 28 "A Basis for a Natural Electricity Tariff A Case Study of the Domestic sector", , SLEMA Journal, Vol 15, Nos. 1 and 2, Sept 2012, p 1-4 (Co-author: N. Wickramarachchi)
- 29 "Design and Build A Transmission Line for a Real Life Power System Model", PATW Sri Lanka 2011, p 62-65 S.V.Herath, C.Ileperuma, W.J.M.L.Himal, K.S.Hettiarachchi. Supervisors: J.R.Lucas, J.Karunanayake
- 30 "Equal Right to Sri Lanka's Natural Energy Resources", Vidulka, August 2011, p 1-6 National Energy Symposium, BMICH, Colombo (Co-author: N. Wickramarachchi)
- 31 "Analysis of Surface Flashover of 33kV Pin Type Insulators due to Saline Pollution", Engineer Vol.: XXXXIII, No. 04, October 2010, p11-16 (Co-authors: N.H.C Janaka, D.G.R. Fernando)
- 32 "Inclusion of Small Signal Stability Assessment to Electromagnetic Transient Programs", Proceedings of 4th IASTED International Conference, April 2008, Malaysia, POWER AND ENERGY SYSTEMS (AsiaPES 2008), ISBN CD: 978-0-88986-732-1, p261-265 (Co-authors: U.D. Annakkage, C.Karawita, D.Muthumuni, R.P. Jayasinghe) Scopus
  - Paper presented at the 4th IASTED Asian Conference on Power and Energy Systems April 2 4, 2008, Langkawi, Malaysia.
- 33 "Intelligent Lightning Warning System", Proceeding of the 2007 Third International Conference on Information and Automation for Sustainability, Melbourne, Australia, December 2007, pp 19-24. (Coauthors: Geeth Jayendra, Sisil Kumarawadu, Lilantha Neelawala, Chathura Jeevantha, P. Dharmapriya)
- 34 "Determination of One Dimensional Earth Resistivity Profile in Multilayer Soil", Proceeding of 13th Annual Symposium on Research for Industry, Engineering Research Unit, University of Moratuwa, Sri Lanka, October 2007, pp.8-11. (Co-authors: IT Dharmadasa, L Udawatta and WDAS Wijepala)
- 35 "Design and Construction of Constant Voltage Transformer", Proceedings of the First International Conference on Industrial and Information Systems, ICIIS 2006, 8 11 August 2006, Sri Lanka, p 40-45 (co-authors: N.N.R Mendis, E.M.M.B Yatiyana, K.C. Wijesinghe and R. Perera) Scopus 4155146
- 36 "Magnetic separator to extract ilmenite from beach sand", Proceedings of the International Conference on information and Automation, December 15-18, 2005, Colombo, Sri Lanka, p 1-6 (co-authors: Indrajith M.K.D.N, Peiris B.C.M., Perera L.P.R.S, Somapriya G.R.H.U.)
- 37 "Power System Harmonic Effects on Distribution Transformers and New Design Considerations for K Factor Transformers", Transactions IEE Sri Lanka, Colombo, vol 6, No 1, Aug 2005, p 22-30 (coauthors: N.R Jayasinghe, K.B.I.M. Perera) Paper presented at the tenth annual conference of the IEE Sri Lanka, September 2003, Hotel Galadari, Colombo.
- 38 "Drying Time for Transformer Core and Winding Assembly", Transactions IEE Sri Lanka, Colombo, vol 6, No 1, Aug 2005, p 40-43 (co-authors: P.D.C. Wijayatunga, Kosala Gunawardhana, Rukshika Pathberiya, N.H.K.L. Sirisena, J.A.Vitharana, K.R.S.Dematagolla, J.A.I.T.Jagoda).
  - Paper presented at the tenth annual conference of the IEE Sri Lanka, September 2003, Hotel Galadari, Colombo.

- 39 "Development of a Software Package for Calculating Current Rating of Medium Voltage Power Cables", Transactions of the IEE Sri Lanka, vol 5, No 1, Sep 2003, p50-57. (co-authors: D.G.A.K. Wijeratna, H.J.C. Peiris, H.Y.R.Perera) Paper presented at the ninth annual conference of the IEE Sri Lanka, September 2002, Hotel Galadari, Colombo.
- 40 "Coconut Oil Insulated Distribution Transformer", Transactions of the IEE Sri Lanka, vol 4, No 2, Sep 2002, p 1-5 (co-authors: D.C. Abeysundara, C. Weerakoon, K B M I Perera, K C Obadage and K.A.I. Gunatunga)

Paper presented at the eight annual conference of the IEE Sri Lanka Centre, September 2001, Hotel Galadari, Colombo.

41 "Historical Development of the Transformer", Transactions IEE Sri Lanka, Colombo, April 2002, vol 4, No 1, p 1-15. (sole author)

Presented as the IEE Sri Lanka Chairman's Lecture on 14 November 2000, Colombo

42 "Increasing the power transfer capability of an ac transmission line using a parallel small power dc link", Transactions IEE Sri Lanka, Colombo, vol 3, No 2, April 2001, p 52-55. (co-author: H Jahan C Peiris)

Paper presented at the fifth annual conference of the IEE Sri Lanka Centre, September 1999, Hotel Galadari, Colombo.

- 43 "Coconut oil as an alternative to transformer oil", ERU Proceedings of the 7th Symposium on Research for Industry, Moratuwa, Nov 2001, p A12-A22, (co-authors: D.C. Abeysundara, C. Weerakoon, K.A.I. Gunatunga and K.C. Obadage)
- 44 "Estimation of Optimum Transformer Capacity Based on Load Curve", Transactions of the IEE Sri Lanka, Jan 2001, Vol 3, No 1, p 36-40 (co-authors: KBMI Perera, KKASD Kumarasinghe, RLIK Dias, UADR Athukorala, PGA Gunawardana)

Paper presented as "Optimization of Transformer Design based on Load Curve", IEE Sri Lanka Centre, Annual Sessions '98, September 1998, p 1-6

- 45 "Software Guided Safe Loading of Transformers", Proceedings, International Conference on Power Transformers, New Delhi, April 2000, p 117-124 (co-author: KBMI Perera)
- 46 "AC-small power DC hybrid transmission for improving power system stability", Electric Power Systems Research, Elsevier, vol 56., 2000, p 9-15 (co-authors: Pahalawaththa, N., Annakkage, U., and Boys, J.)
- 47 "Lightning protection of pole mounted transformers and its application in Sri Lanka", Transactions IEE Sri Lanka, Colombo, Vol 3, No 2, April 2001, p 43-51. (co-author: D A J Nanayakkara)

Paper presented at the fifth annual conference of the IEE Sri Lanka Centre, September 1999, Hotel Galadari, Colombo.

- 48 "Cost-benefit analysis for introduction of compact fluorescent lamps A case study for Sri Lanka (1995)", SLEMA Journal, Vol 9, No 1, April 2000, p 3-5 (co-authors: W J L S Fernando, V B Wijekoon et Al). Paper presented at SLEMA Sessions, 1996
- 49 "Loading of Transformer beyond nameplate rating", Engineer, vol xxx, September 1999, No 03, Colombo, pp 58-65(co-author: KBMI Perera)
- 50 "The co-ordination of directional overcurrent relays based on direct iterative method", AUPEC '98, Tasmania, Australia, Vol. 1, September 1998, p331-336 (co-authors: Dezhi Luo, C.P. Arnold).
- 51 "A Feasibility study on the use of alternative energy sources for tea drying", UPEC 1997, UMIST, Manchester, UK, September 1997, p 1-4 (co-authors: P.D.C. Wijayatunga, C.J. Hettiarachchi, C.D.M. Jayawardena, C.V.K. Periyapperuma, L.D.K.B. Gamage
- 52 "Some measurements on energy efficient compact fluorescents", Symposium on Research for Industry, University of Moratuwa, 12 July 1996, p 1-11 (sole author)
- 53 "Power Factor and Harmonic distortion in Compact Fluorescent Lamps", Trans IESL, Colombo, 1995, Vol. 1, Part B, p 29-37 (co-author: V.B.Wijekoon) Discussion on "Power Factor and Harmonic distortion in Compact Fluorescent Lamps", Trans IESL, 1995, vol. II, p 26-28.
- 54 "Energy Efficient Lighting for Households: A Survey", SLEMA Journal, vol. 6, No 1, Apr/May 1995, p 1-9 (co-authors: H Y R Perera, P D C Wijayatunga, D.C. Wijeratna, T Siyambalapitiya, T A K Jayasekera)
- 55 "Cost Effective Insulation through Proper Co-ordination", Professor R H Paul Commemoration Lecture 1994, Engineer, Colombo, vol. xxiii, No 1, June 1995, p 59-74 (sole author)
- 56 "Efficient Simulation Techniques for some common non-linear elements in Power System Studies", PSCC Conference, vol. 11, France, Aug Sep 1993, p 1-7, (Co-authors: P.G.McLaren, R.P.Jayasinghe, W.W.L. Keerthipala)

- 57 "A simulation model for capacitively coupled voltage transformers in relay studies", Proceedings, IPEC Conference, Institution of Engineers, Singapore, March 1993, p 555 560 (Co-authors: W.W.L. Keerthipala, R.P. Jayasinghe, P.G. McLaren)
- 58 "Frequency dependant Magnetic core-loss simulation in time domain studies", Trans IESL, Colombo, 1992, Vol. 1, p 238-245 (sole author) Discussion on "Frequency dependant Magnetic core-loss simulation in time domain studies", Trans IESL, 1992, vol. II, p 49-50.
- 59 "Inclusion of frequency dependant losses in transformer flux-current excursions", IJEEE, Manchester, Oct 1992, vol. 29, No 4, p 321-328 (sole author)
- 60 "Improved Simulation models for current and voltage transformers in relay studies", IEEE Trans on Power Delivery, Jan 1992, Vol. 7, No 1, p 152-159 (co-authors: P.G. McLaren, W.W.L. Keerthipala, R.P. Jayasinghe)
- 61 "Generation of Transient flux-current excursions in instrument transformer cores", Trans IESL, Colombo, 1991, Vol. 1, p 96-101 (co-author: McLaren) Discussion on "Generation of Transient flux-current excursions in instrument transformer cores", Trans IESL, Colombo, 1991, Vol. II, p 32-34.
- 62 "A computationally efficient MOV model for series compensation studies", IEEE Trans on Power Delivery, Oct 1991, Vol. 6, No 4, p 1491-1498 (co-author: McLaren)
- 63 "B-H loop representation for transient studies", IJEEE, Manchester, July 1991, vol. 28, No 3, p 261-270, (co-author: P.G. McLaren)
- 64 "A Framework to Assess the Economics of Wind Power Generation using Horizontal Axis Wind Turbines", Engineer, Colombo, vol. xix, No 02, June 1991, p 46-55 (co-authors: W.J.L.S. Fernando, M.P. Dias, S.I.T. Fernando, S.J.S. De Mel)
- 65 "Closed-loop relay testing with real time electro-magnetic transients simulation", Canadian Electrical Association Proceedings, Toronto, May 1991, p 1-15, (co-authors: P. McLaren, R. Wierckx, R. Kuffel, L. Arendt, J. Giesbrecht)
- 66 "A workstation environment for assessing relay performance", Proc of IEEE/Wescanex '91, Regina, May 1991, p 14-19, (co-authors: P.G. McLaren, A.M. Gole I. MacBeath, G. Irvin and C. Bohn)
- 67 "Energisation of a Transformer feeder", Engineer, Colombo, vol. xix, No 1, March 1991, p 14-24 (sole author)
- 68 "Transient response of capacitive voltage transformers", Engineer, Vol. xviii, No 4, Dec 1990, p 27-32 (co-author: P. G. McLaren)
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- 85 "Inclusion of surge diverters in system overvoltage calculations", Proc IEE, vol. 126, No 12, Dec 1979, p1263-1268, (Co-author: K.J. Cornick)
- 86 "The dc network analyser: An effective instrument for the teaching of the load flow problem", IJEEE, vol. 15, p 351-359, Manchester UP, 1978 (Co-authors: S. Karunaratne, H. Sriyananda, A. S. Induruwa, B. S. P. Perera)
- 87 "A fast decoupled sparsity oriented algorithm for the solution of the load flow problem in electric power systems", Trans IESL, p 36-44, Colombo, 1976, (co-authors: S. Karunaratne, H. Sriyananda, A. S. Induruwa, B. S. P. Perera)

# **Annexure 2 - As Resource Person at Seminars And Workshops**

- 1. "Student Assessment", half-day course, Staff Development Centre, Sir John Kothalawala Defence Univeristy, Kandawala, Ratmalana (2018)
- 2. "Design of Electrical Installation Overcurrent Protection" (March 2015), Annual 8-day Course, Institution of Engineers Sri Lanka
- 3. "Necessity for adopting International Standards" (15 August 2014), Keynote speech, OBO Bettermann Seminar on Fire Barriers & Sealing Systems August 2014
- 4. "The Strategic Plan of the Department of Electrical Engineering" (21-22 June 2013), Workshop for Strategic Plan Development, University of Moratuwa.
- 5. "Necessity of Standards for Lightning Protection" (9 November 2012), Familiarization Seminar on IEC 62305 Lightning Protection Systems organised Sri Lanka Standards Institution, Colombo
- 6. "What you should know about instrument specifications" (22 August 2012) Keynote Speech, Fluke Technical Seminar & Demonstration for Testing & Measuring Instruments, Colombo
- 7. "Review of Lightning Phenomena" (23 February 2012), Seminar on Lightning Protection, ICTAD Auditorium, Colombo
- 8. "Surge Protection Devices" (November 2009), 2-day Course on LV and MV Protection, IET Sri Lanka Network, Hotel Galadari, Colombo
- 9. "Role of Earthing for Lightning Protection" (November 2009), 2-day Course on LV and MV Protection, IET Sri Lanka Network, Hotel Galadari, Colombo
- 10. "Lightning Protection, Evaluation & Management of Risk" (July August 2008), 6-day Course on Lightning Protection and Electrical Safety organised by IET Sri Lanka Network at SLFI, Colombo
- 11. "Earthing in electrical safety" (28 March 2006), 1-day National Symposium on Electrical Safety, organised by IEE Sri Lanka, sponsored by Orange Electric
- 12. "Core Colour changes" (26 June 2006), Institution of Engineering and Technology Seminar on New Core Colour Identification For Electric Cables at Hotel Galadari
- 13. "New Core Colour Identification for Electric Cables" (14 February 2006), Seminar on the core colour changes of fixed installations, organised by Cables and Conductors Sectoral Committee of the Sri Lanka Standards Institution
- 14. "The Path to become a Chartered Engineer" (10 August 2005), at Galadari Hotel by the International Membership Advisor for the IEE, Professor J R Lucas
- 15. "UNESCO Regional Worshop on Lighning Physics" (29 April 7 May 2003), sponsored by UNESCO, organised by the Department of Physics, University of Colombo
- 16. "Web Publishing for Education and Research" (31 July, 2000), One day ERU Workshop, University of Moratuwa.